A METHOD FOR DESIGNING A COMPOUND BASED ON THE THREE DIMENSIONAL STRUCTURE OF PHOSPHOINOSITIDE DEPENDENT PROTEIN KINASE 1 (PDK1)

Cross-reference to Related Application

The present application is the US national phase under 35 USC 371 of International Application No. PCT/GB03/02509, filed June 9, 2003, and published in the English language as WO 03/104481.

Reference to Sequence Listing

The present application incorporates by reference the sequence listing submitted as an ASCII text filed via EFS-Web on January 18, 2010. The Sequence Listing is provided as a file entitled 8400121_1.txt, created on January 18, 2010, which is 4 Kb in size.

Field of the Invention

The present invention relates to protein kinase catalytic domain structures and mutants and screening assays making use thereof.

Background of the Invention

The 3-Phosphoinositide Dependent Protein Kinase-1 (PDK1) is a key protein kinase, regulating activity of a group of related protein kinases through phosphorylation. These kinases include isoforms of Protein Kinase B (also known as Akt) [Brazil and Hemmings, 2001,Scheid and Woodgett, 2001], p70 ribosomal S6 kinase (S6K) [Alessi et al.,.1997,Volarevic and Thomas, 2001], p90 ribosomal S6 Kinase (RSK) [Frodin and Gammeltoft, 1999] and the serum and glucocorticoid induced-protein kinase (SGK) [Lang and Cohen, 2001]. These enzymes are stimulated by hormones and growth factors and phosphorylate regulatory proteins mediating the various physiological effects of these agonists.

PDK1 possesses an N-terminal kinase catalytic domain and a C-terminal pleckstrin homology (PH) domain [Alessi et al., 1997, Stephens et al., 1998]. PDK1 activates its substrates by phosphorylating these kinases at their activation loop (reviewed in [Alessi, 2001, Toker and Newton, 2000]). The phosphorylation of PKB by PDK1 is dependent upon prior activation of the phosphoinositide 3-kinase (PI-3-kinase) and the production of the second messenger, phosphatidylinositol 3,4,5-trisphosphate (PtdIns(3,4,5)P_3) which binds to the PH domains of PDK1 and PKB. This does not activate either PKB or PDK1 but instead recruits and co-localises these enzymes at the plasma membrane.

Unlike PKB, the other PDK1 substrates described thus far do not interact with PtdIns(3,4,5)P_3 nor is the rate at which they are phosphorylated by PDK1 further enhanced by the binding of PDK1 to PtdIns(3,4,5)P_3. Instead the ability of PDK1 to phosphorylate S6K, SGK and RSK is promoted by phosphorylation of these enzymes at a residue located C-terminal to the kinase catalytic domain in a region known as the hydrophobic motif [Alessi et al., 1997, Kobayashi and Cohen, 1999, Pullen et al., 1998]. The kinases that phosphorylate the hydrophobic motif of S6K and SGK are unknown but as the phosphorylation of this residue *in vivo* is dependent on PI-3-kinase activation, the hydrophobic motif kinases and/or the hydrophobic motif phosphatases may be regulated by PtdIns(3,4,5)P_3. In the case of RSK isoforms, phosphorylation by the ERK1/ERK2 MAP kinases induce phosphorylation of the hydrophobic motif (reviewed in Frodin and Gammeltoft, 1999).

PDK1 belongs to the same subfamily of protein kinases as its substrates, termed the AGC protein kinases as they are related to the cAMP dependent protein kinase (PKA)/cGMP dependent protein kinase/Protein kinase C (PKC). PKA is the only AGC kinase whose crystal structure has been

solved. Like all protein kinases, its catalytic core possesses an N-terminal lobe consisting mainly of β -sheet and a predominantly α -helical C-terminal lobe [Taylor et al., 1992, Husen and Kuriyan, 2002]. The ATP binding site is located in between the 2 lobes [Johnson et al., 2001,Knighton et al., 1991]. At the very C-terminus, PKA possesses an extended loop that terminates in the sequence FXXF (SEQ ID NO:1) which resembles the first part of the hydrophobic motif phosphorylation site of S6K and SGK (FXXFS/TY, SEQ ID NO:2) in which the Ser/Thr is the phosphorylated residue [Biondi et al., 2000]. In the structure of PKA, the FXXF motif (SEQ ID NO:1) is buried in a hydrophobic pocket in the small lobe of the PKA catalytic domain [Knighton et al., 1991] and mutation of either of the Phe residues drastically reduces PKA activity towards a peptide substrate [Etchebehere et al., 1997]. Unlike other AGC kinases, PDK1 does not possess a hydrophobic motif C-terminal to its catalytic domain. However, there is evidence that PDK1 possesses a hydrophobic pocket in the small lobe of its catalytic domain similar to that in PKA. We have biochemically demonstrated that the interaction of PDK1 with four of its substrates (S6K1, SGK1, PKζ and PKC related kinase-2 (PRK2)) is reduced or abolished by mutation of residues predicted to form part of this pocket [Balendran et al., 2000,Biondi et al., 2000]. Furthermore, mutation of a central residue in the predicted pocket, Leu 155, prevented PDK1 from phosphorylating and activating S6K1 and SGK1 without affecting its ability to phosphorylate either PKB or a short peptide substrate that encompasses the activation loop of PKB (T308tide) [Biondi et al., 2000]. The hydrophobic pocket on the kinase domain of PDK1 has been termed the "PIF-pocket" after the name of the first AGC-kinase hydrophobic motif-containing peptide (PDK1 Interacting Fragment) that was found to bind PDK1 [Balendran et al., 1999a]. It has been suggested that the PIF-pocket in PDK1 functions as a docking site, enabling PDK1 to interact with some of its.physiological substrates. Furthermore, there is evidence that phosphorylation of the

hydrophobic motif of S6K1, SGK and RSK2 [Balendran et al., 1999b,Biondi et al., 2001, Frodin et al., 2000] promotes the interaction of these enzymes with PDK1. These findings suggest that the PIF-pocket on PDK1 could contain a phosphate binding site promoting the binding of PDK1 to a subset of substrates (S6K, SGK and RSK) once these enzymes have been phosphorylated at their hydrophobic motif. This would result in a physiological phosphate dependent interaction. In addition there is evidence that occupancy of the PIF-pocket activates PDK1 as peptides that encompass the hydrophobic motif of PRK2 [Biondi et al., 2000] and RSK [Frodin et al., 2000] induce a 4-6-fold activation of PDK1.

Previous predicted structures PDK1 catalytic domain were obtained using homology modelling methods based upon structural information available from the catalytic domain of PKA (Biondi et al., 2000). These predictions of the PDK1 catalytic domain structure were thus biased towards the catalytic domain from which the structural information was obtained.

Summary of the Invention
We have determined a crystal structure for the kinase domain of the AGC family protein kinase PDK. The structure defines the PIF-pocket and reveals an adjacent possible phosphate binding site. Furthermore, we have performed structure-based mutagenesis and biochemical analysis which support the existence of such a phosphate-binding site. This may mediate the phosphate dependent docking interaction with substrates such as (for PDK1) S6K and SGK. We have used a novel algorithm to define the conformational state of the crystallised PDK1 relative to all the reported structures of PKA, which shows that while PDK1 has all the signs of being in an active form in the crystal, its overall conformation is in-between and 'open' and 'closed' state. We have also determined crystal structures for the kinase domain of PDK1 in complex with modulators of PDK1 activity.

On the basis of this work we provide drug screening methods and mutated protein kinase molecules (which are useful in, for example, drug screening methods).

A first aspect of the invention provides a method for selecting or designing a compound for modulating the activity of phosphoinositide dependent protein kinase 1 (PDK1), the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the protein kinase catalytic domain of PDK1, wherein a three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is compared with a three-dimensional structure of a compound, and a compound that is predicted to interact with the said protein kinase catalytic domain is selected, wherein the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure (or part thereof) determined for a polypeptide consisting of residues equivalent to residues 51 to 359 of full length human PDK1, or a fragment or fusion thereof.

Brief Description of the Drawings

Figure 1 provides an overview of the PDK1 structure.

Figures 2A and 2B show the PIF-pocket.

Figure 3 shows a structure-based sequence alignment

Figures 4A-C show PDK1 binding & activation studies.

Figures 5A and 5B show interactions of regulatory phosphates with the αC helix.

Figures 6A and 6B show essential dynamics.

Figure 7 shows alignment of AGC protein kinase family members.

Figure 8 shows staurosporine and UCN-01 electron density.

Figure 9 shows details of the inhibitor binding sites.

Detailed Description of the Invention

The term PDK1 as used herein includes a polypeptide (a PDK1 polypeptide) comprising the amino acid sequence identified as PDK1 in Alessi D.R *et al* (1997) *Curr. Biol.* **7**: 261-269, Alessi D.R *et al* (1997) *Curr. Biol.* **7**: 776-789, Stokoe D *et al* (1997) *Science* **277**: 567-570 or Stephens L *et al* (1998) *Science* **279**: 710-714, or a variant, fragment, fusion or derivative thereof, or a fusion of a said variant or fragment or derivative, for example as described in WO98/41638, incorporated herein by reference. It is preferred that the said PDK1 polypeptide is a protein kinase. It is preferred that the said PDK1 polypeptide is a protein kinase that is capable of phosphorylating a threonine residue that lies in a Thr-Phe-Cys-Gly-Thr-Xaa-Glu-Leu consensus motif (where the underlined Thr corresponds to the threonine that is phosphorylated by PDK1 and Xaa is a variable residue, SEQ ID NO:9), and preferably that is capable of phosphorylating PKB, for example PKBα, at residue Thr308. The rate at which the said PDK1 polypeptide is capable of phosphorylating a threonine residue as described above may be increased in the presence of PtdIns(3,4,5)P$_3$ or PtdIns(3,4)P$_2$ but it will be appreciated that this is not essential. The said polypeptide may be capable of phosphorylating the equivalent residues to Thr308 of PKBα on PKC isoforms (LeGood *et al* (1998) *Science* **281**: 2042-2045; *et al* (1998) *Curr. Biol.* **8**: 1069-1077; Dutil *et al* (1998) *Curr. Biol.* **8**:1366-1375), p70 S6 kinase (Alessi *et al* (1998) *Curr. Biol.* **8**: 69-81; Pullen *et al* (1998) *Science* **279**, 707-710), SGK (sequence given in Webster *et al* (1993) *Mol. Cell. Biol.* **13**, 1031-2040; equivalent residues identified in US application no 112217 filed on 14 December 1998; GB 9919676.8, filed on 19 August 1999, and Kobayashi & Cohen (1999)) and PKA (Cheng *et al* (1998) *Proc. Natl. Acad. Sci. USA* **95**: 9849-9854). It may further be preferred that the substrate specificity and/or other characteristics of the said PDK1 polypeptide *in vitro* may be substantially as reported in Alessi D.R *et al* (1997) *Curr. Biol.* **7**: 261-269, Alessi D.R *et al* (1997) *Curr. Biol.* **7**: 776-

789, Stokoe D *et al* (1997) *Science* **277**: 567-570 or Stephens L *et al* (1998) *Science* **279**: 710-714.

We have found that a fragment of PDK1 consisting essentially of residues equivalent to residues 51 to 359 of full length human PDK1 is particularly beneficial for determining a structure for the catalytic domain of PDK1. This fragment has, for example, protein kinase activity and surprisingly beneficial solubility and stability characteristics which make it particularly suitable for structural studies, for example formation of crystals which may be analysed by X-ray crystallography methods. Other fragments of PDK1 were surprisingly found to be unsuitable for crystallisation, as discussed in Example 5.

It is particularly preferred that the structure is one determined for the fragment consisting of residues 51 to 359 of full length human PDK1. The fragment may comprise an N-terminal or C-terminal fusion polypeptide (ie amino acid sequence not derived from PDK1), though this is preferably of less than or equal to about 10, 5, 4, 3, 2 or 1 amino acids. For example, it is particularly preferred that the structure is one determined for a polypeptide consisting residues 51 to 359 of full length human PDK1 and the amino acid sequence Gly-Pro (or less preferably other sequence forming part of a protease cleavage site) preceding the methionine corresponding to Met51 of human PDK1. A further preferred structure is one determined for the fragment consisting essentially of residues 71 to 359 of full length human PDK1 (or residues equivalent thereto), which also has protein kinase activity.

It is particularly preferred that the structure is one determinable by a method as described in Example 1, for example a structure obtainable by X-ray analysis from a crystal obtainable using a mother liquor solution comprising

ammonium sulphate, preferably between 1.8 and 2.2M. It is particularly preferred that the mother liquor solution is of pH 7 to 9, preferably 7 to 8.5, most preferably pH8.5, and comprises ammonium sulphate and preferably ATP. Crystals may form in the absence of ATP but better crystals may be

5   obtained in the presence of ATP. Preferably the crystal is obtainable using a mother liquor solution containing 0.1M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP. Further preferred details of the crystallisation and X-ray analysis are described in Example 1, for example as partially summarised in Table 1 (shown in Example 1).

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It is particularly preferred that the structure is that represented by the structure co-ordinates shown in Examples 2, 3 or 4, or a structure based or modelled on such a structure or co-ordinates. The co-ordinates shown in Example 2 are for the PDK1 fragment (SEQ ID NO:102) with all alternate

15   side chains. The co-ordinates shown in Example 3 are for the PDK1 fragment (SEQ ID NO:102) without alternate side chains. The co-ordinates shown in Example 4 are for the dimer of the PDK1 fragment (SEQ ID NO:102), without alternate side chains; chain A is the molecule for which co-ordinates are given in Examples 2 and 3, and chain B is the symmetry-

20   related molecule.

The structure may be one determined following crystallisation in the presence of a known or potential interactor with PDK1 or modulator of PDK1 activity (as discussed further below), for example a known or

25   potential inhibitor of PDK1 activity. For example, the structure may be one determined following crystallisation in the presence of a known protein kinase inhibitor, for example an inhibitor that binds at the ATP binding site, for example an ATP-competitive inhibitor, for example staurosporine or a staurosporine derivative, for example UCN-01. Examples of such

30   crystallisation techniques and analysis are given in Example 6, and

examples of co-ordinates are given in Examples 7 and 8. Example 7 represents the co-ordinates of PDK1 fragment (SEQ ID NO:102) co-crystallised with Staurosporine, whereas in Example 8, the co-ordinates of PDK1 fragment (SEQ ID NO:102) co-crystallised with UCN-01.

It will be appreciated that some variation in crystallisation conditions (for example different mother liquors) may be required for co-crystallisation with different molecules. Techniques for investigating suitable crystallisation conditions in each case will be well known to those skilled in the art.

A further aspect of the invention provides a crystalline form of a polypeptide as defined in any of the preceding aspects of the invention, for example a polypeptide consisting of residues equivalent to residues 51 to 359 of full length human PDK1, or a fragment or fusion thereof; a polypeptide consisting of residues 51 to 359 of full length human PDK1 or a fusion thereof; a polypeptide consisting of residues 51 to 359 of full length human PDK1 and the amino acid sequence Gly-Pro preceding the methionine corresponding to Met51 of human PDK1; a polypeptide consisting of residues 71 to 359 of full length human PDK1 or a fusion thereof.

The crystalline form may further comprise co-crystallised molecule, for example a known or potential interactor with PDK1 or modulator of PDK1 activity, or a test compound whose properties *vis a vis* PDK1 may not be known. For example, the co-crystallised molecule, for example test compound, may be a molecule that is known to modulate protein kinase activity, or may already be known to modulate PDK1 protein kinase activity. For example, the co-crystallised molecule may be staurosporine,

the staurosporine derivative UCN-01 (7-hydroxyl staurosporine) or other staurosporine derivative.

Such co-crystallisation and structures determined from co-crystallised
5   molecules may be useful in molecular modelling and in determining features of the polypeptide and compound that are important for interaction. This may be useful in designing or selecting further test compounds, for example as discussed in Example 6.

10   In one embodiment it is preferred that the modelled molecule is predicted to bind to a region of the structure termed the "PIF binding pocket", the "phosphate binding pocket" and/or the α C helix (residues equivalent to 123-136 of full length human PDK1), particularly the residue equivalent to Arg 131 of full length human PDK1, or interacting regions. As discussed in
15   Example 1, the PIF binding pocket is considered to be formed by residues including Lys115, Ile118, Ile119 on the αB helix, Val124, Val127 on the αC helix and Leu 155 on β-sheet 5. The phosphate binding pocket is considered to be formed by residues including Lys76, Arg 131, Thr 148 and Gln150. Residues of the αC helix that are considered to interact either with
20   phosphate bound in the phosphate binding site or intermolecularly with phosphorylated Ser241 of PDK1 include Arg131 (phosphate binding site) and Arg 129 and His126 (phosphorylated Ser241). Glu 130 is involved in binding the α-phosphate of the bound ATP, and Val124 and Val127 form part of the PIF binding pocket, as discussed in Example 1.

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It is preferred that the compound is for modulating the protein kinase activity of PDK1. The protein kinase activity of PDK1 that is modulated may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Thr/Ser-Phe-Cys-Gly-Thr-Xaa-Glu-Leu ("PDK1"

activity, SEQ ID NO:9). Alternatively or in addition, the modulated activity may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Phe-Xaa-Xaa-Phe-Ser/Thr-Phe/Tyr ("PDK2" activity, SEQ ID NO:11). The substrate polypeptide may be, for example, a PKB, SGK, p70 S6 kinase, PKC or (in relation only to phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Thr/Ser-Phe-Cys-Gly-Thr-Xaa-Glu-Leu (SEQ ID NO:9) PKA polypeptide. The modulated protein kinase activity may be towards PKB or other PH-domain-comprising/phosphoinositide-binding substrate of PDK1; or SGK, S6K or other substrate of PDK1 whose phosphorylation by PDK1 is promoted by phosphorylation of the substrate on the Ser/Thr of the "hydrophobic motif" FXXFS/TY (SEQ ID NO:2); or an artificial substrate such as T308tide (which comprises the sequence of PKB which is phosphorylated by PDK1) or PDKtide (which comprises the sequence of PKB which is phosphorylated by PDK1 (eg T308tide) fused to a sequence mimicking a phosphorylated hydrophobic motif ie FXXFZY (SEQ ID NO: 2), in which Z is a negatively charged (for example acidic) residue (eg PIFtide)). Such substrates for PDK1 are discussed, for example, in WO 01/44497. Other activities of PDK1 that may be modulated include interactions with other polypeptides or phosphoinositides and/or intramolecular interactions.

It is preferred that the three-dimensional structure of at least a part of the protein kinase catalytic domain of the PDK1 is a three-dimensional structure of at least a part of the PIF binding pocket, the phosphate binding pocket and/or the α C helix, or interacting regions of PDK1, and a compound that is predicted to interact with the said PIF binding pocket, the phosphate binding pocket and/or the α C helix, or interacting regions of PDK1 is selected. Alternatively, the compound may bind to a portion of said PDK1 polypeptide that is not the PIF binding pocket, the phosphate

binding pocket and/or the α C helix, or interacting regions of PDK1, for example so as to interfere with the binding of the ATP or substrate polypeptide or their access to the catalytic site. In a still further example, the compound may bind to a portion of PDK1 so as to decrease said polypeptide's activity by an allosteric effect. This allosteric effect may be an allosteric effect that is involved in the natural regulation of PDK1's activity.

It is further preferred that the three-dimensional structure of at least a part of the protein kinase catalytic domain of PDK1 is a three-dimensional structure of the part of the protein kinase catalytic domain of PDK1 that is defined by residues Lys115, Ile118, Ile119 (on the αB helix), Val124, Val127 (on the αC helix) and Leu 155 (on β-sheet 50 and/or residues Lys76, Arg 131, Thr 148 and Gln150 and/or residues Arg131, Arg 129, His126, Glu 130 of full-length human PDK1 and a compound that is predicted to interact with the said part of the protein kinase catalytic domain is selected.

For example, it is preferred if the portions of the structure of PDK1 shown in Figures 1 and 2 as forming the PIF binding pocket and/or phosphate binding pocket and/or αC helix interactions (for example with phosphoserine241) are compared with the structure of the candidate compound.

A further aspect of the invention provides a method for selecting or designing a compound for modulating the activity of a hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124,

Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, the method comprising the step of using molecular modelling means to select or design a compound that is predicted to interact with the said hydrophobic pocket-containing protein kinase, wherein a three-dimensional structure of a compound is compared with a three-dimensional structure of the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, and a compound that is predicted to interact with the said phosphate binding pocket and optionally also the hydrophobic pocket and/or αC helix or region interacting therewith, is selected.

The three-dimensional structure of a compound may be compared with the three-dimensional structure of the hydrophobic and/or phosphate binding pocket and/or αC helix or region interacting therewith, as appropriate. A compound that can interact with the hydrophobic pocket and/or phosphate binding pocket, in particular residues noted above as defining such regions, in a similar manner (for example similar separation and/or type of interaction ie hydrophobic or ionic, and/or similar cumulative energy of interaction) to an interacting polypeptide such as S6K-pHM may be selected. Methods of assessing the interaction are well known to those skilled in the art and are discussed further below.

The three-dimensional structures that are compared may be, as appropriate, predicted or modelled three-dimensional structures (for example on the basis of a PDK1 structure as referred to above, for example as represented by the co-ordinates given in Examples 2, 3 or 4 or 6 or 7) or may be three-dimensional structures that have been determined, for example by

techniques such as X-ray crystallography, as well known to those skilled in the art. The three-dimensional structures may be displayed by a computer in a two-dimensional form, for example on a computer screen. The comparison may be performed using such two-dimensional displays.

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The following relate to molecular modelling techniques: Blundell *et al* (1996) Stucture-based drug design *Nature* **384**, 23-26; Bohm (1996) Computational tools for structure-based ligand design *Prog Biophys Mol Biol* **66(3)**, 197-210; Cohen *et al* (1990) *J Med Chem* **33**, 883-894; Navia *et al* (1992) *Curr Opin Struct Biol* **2**, 202-210 .

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The following computer programs, for example, may be useful in carrying out the method of this aspect of the invention: GRID (Goodford (1985) *J Med Chem* **28**, 849-857; available from Oxford University, Oxford, UK); MCSS (Miranker *et al* (1991) *Proteins: Structure, Function and Genetics* **11**, 29-34; available from Molecular Simulations, Burlington, MA); AUTODOCK (Goodsell *et al* (1990) *Proteins: Structure, Function and Genetics* **8**, 195-202; available from Scripps Research Institute, La Jolla, CA); DOCK (Kuntz *et al* (1982) *J Mol Biol* **161**, 269-288; available from the University of California, San Francisco, CA); LUDI (Bohm (1992) *J Comp Aid Molec Design* **6**, 61-78; available from Biosym Technologies, San Diego, CA); LEGEND (Nishibata *et al* (1991) *Tetrahedron* **47**, 8985; available from Molecular Simulations, Burlington, MA); LeapFrog (available from Tripos Associates, St Louis, MO); Gaussian 92, for example revision C (MJ Frisch, Gaussian, Inc., Pittsburgh, PA ©1992); AMBER, version 4.0 (PA Kollman, University of California at San Francisco, ©1994); QUANTA/CHARMM (Molecular Simulations, Inc., Burlington, MA ©1994); and Insight II/Discover (Biosym Technologies Inc., San Diego, CA ©1994). Programs may be run on, for example, a Silicon

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Graphics™ workstation, Indigo²™ or IBM RISC/6000™ workstation model 550.

Several *in silico* methods could be employed, for example, via a substructure search for new ligands using programmes such as CHEM DRAW or CHEM FINDER. The basic structure of the natural ligand (for example a phosphorylated hydrophobic motif peptide such as S6K-pHM) capable of binding to PDK1 (or other protein kinase) is taken (or predicted) and various structural features of it (for example the hydrophobic and negatively charged entities) are submited to a programme which will searches a set of chemical company catalogues for chemicals containing this substructure.

These compounds are then screened by eye for groups that could not interact with the PIF/phosphate binding pockets (or the αC residues/interacting region) because, for example, they are too large or have steric or charge hindrance, and those are discarded. The remaining chemicals are submitted to a PRODRG server and topologies/co-ordinates for these chemicals are created. These chemicals are modelled into the structure, from which chemicals that are possibly able to bind to the PIF/phosphate binding site domain/αC helix/interacting region are selected. Further details of the PRODRG programme are available _in the art, for example, from Daan van Aalten Laboratory.

These compounds may then be ordered or synthesised and assessed, for one or more of ability to bind to and/or modulate PDK1 (or other protein kinase) activity. The compounds may be crystallised with the PDK1 or other protein kinase protein and the structure of any complex determined, as illustrated in Examples 6 to 8.

An alternative approach is to use PRODRG: a tool for generating GROMOS/MOL2/WHATIF topologies and hydrogen atom positions from small molecule PDB files. We take the natural ligand and computationally vary all possible groups at each site on the ligand, with a variety of new groups while the protein co-ordinates and the ligand back-bone co-ordinates remain fixed the results can then be screened for hindrance and repulsion, and the molecules are obtained either through catalogues or made.

As noted above, the selected or designed compound may be synthesised (if not already synthesised) or purified and tested for its effect on the relevant hydrophobic/phosphate pocket-containing protein kinase, for example its effect on the protein kinase activity. The compound may be tested in a screening method of the invention or other screening method. The compound may be formulated for pharmaceutical use, for example for use in *in vivo* trials in animals or humans, or for use in agriculture, for example as an antifungal agent.

It may be useful to analyse a protein kinase structure (for example a structure determined or predicted for a complex of the protein kinase with a binding partner) in order to determine the activation state of the structure. This may be useful in further modelling binding of the binding partner to the protein kinase in other activation states, and in predicting how the binding partner may affect the activation state of the protein kinase or compete with other potential binding partners. It may also be useful in designing and assessing derivatives of the binding partner.

Thus, a further aspect of the invention provides a method for assessing the activation state of a structure for a protein kinase, wherein the structure is analysed using principle component analysis of the structure co-ordinates. The method may further comprise the step of classifying the activation state

of the structure as "open", "closed" or "intermediate". Details of the analysis, which involves the generation of eigenvectors and associated eigenvalues are given in Example 1. The analysis makes use of techniques described in Amadei *et al* (1993) Essential dynamics of proteins. *Proteins*

5   **17**, 412-425.

The hydrophobic/phosphate pocket-containing protein kinase may be PDK1. Alternatively, it may be an isoform of Serum and Glucocorticoid stimulated protein kinase (SGK), Protein Kinase B (PKB), p70 S6 kinase,

10   p90 RSK, PKC isoforms (for example PKCα, PKCδ, PKCζ), PRK1, PRK2, MSK1 or MSK2. Hydrophobic/phosphate pocket-containing protein kinases and their EMBL database accession numbers are listed in Table I. Sequences considered to form the phosphate binding pocket from representative hydrophobic/phosphate pocket-containing protein kinases are

15   shown in Figure 5. All AGC family protein kinases other than PKA may be hydrophobic/phosphate pocket-containing protein kinases, as defined above. In addition to the protein kinases shown in Figure 7, rhodopsin and G-protein coupled receptor protein kinases, for example, may possibly also have a hydrophobic/phosphate pocket as defined above.

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The terms SGK, PKB, p70 S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2, for example, as used herein include a polypeptide (a SGK, PKB, PKA, p70S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2 polypeptide) comprising the amino acid sequence identified as a SGK, PKB, p70 S6

25   kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2, respectively, in the relevant EMBL database records indicated in Table 2.

Table 2

	Activation or T-	AGC Hydrophobic	Accession

	Loop	Motif	number
consensus:	<u>T</u>FCGTxxYxAPD	Fxx<u>F</u>SY	
	(SEQ ID NO:41)	(SEQ ID NO:42)	
	L E	Y<u>T</u>F	
PKBα	<u>T</u>FCGTPEYLAPE	FPQ<u>F</u>SY	(Y15056)
	(SEQ ID NO:45)	(SEQ ID NO:46)	
PKBβ	<u>T</u>FCGTPEYLAPE	FPQ<u>F</u>SY	(P31751)
	(SEQ ID NO:47)	(SEQ ID NO:48)	
PKBγ	<u>T</u>FCGTPEYLAPE	FPQ<u>F</u>SY	(AF135794)
	(SEQ ID NO:49)	(SEQ ID NO:50)	
SGK1	<u>T</u>FCGTPEYLAPE	FLG<u>F</u>SY	(AAD41091)
	(SEQ ID NO:51)	(SEQ ID NO:52)	
SGK2	<u>T</u>FCGTPEYLAPE	FLG<u>F</u>SY	(AF169034)
	(SEQ ID NO:53)	(SEQ ID NO:54)	
SGK3	<u>T</u>FCGTPEYLAPE	FLG<u>F</u>SY	(AF169035)
	(SEQ ID NO:55)	(SEQ ID NO:56)	
PKCα	<u>T</u>FCGTPDYIAPE	FEG<u>F</u>SY	(4506067)
	(SEQ ID NO:57)	(SEQ ID NO:58)	
PKCβI	<u>T</u>FCGTPDYIAPE	FAG<u>F</u>SY	(4506069)
	(SEQ ID NO:59)	(SEQ ID NO:60)	
PKCβII	<u>T</u>FCGTPDYIAPE	FEG<u>F</u>SF	(P05127)
	(SEQ ID NO:61)	(SEQ ID NO:62)	
PKCγ	<u>T</u>FCGTPDYIAPE	FGG<u>FT</u>Y	(P05129)
	(SEQ ID NO:63)	(SEQ ID NO:64)	
PKCδ	<u>T</u>FCGTPDYIAPE	FAG<u>F</u>SF	(5453970)
	(SEQ ID NO:65)	(SEQ ID NO:66)	
PCKζ	<u>T</u>FCGTPNYIAPE	FEG<u>F</u>EY	(4506079)
	(SEQ ID NO:67)	(SEQ ID NO:68)	
PKCι	<u>T</u>FCGTPNYIAPE	FEG<u>F</u>EY	(4506071)
	(SEQ ID NO:69)	(SEQ ID NO:68)	

PRK1	TFCGTPEFLAPE	FLDFDF	(AAC50209)
	(SEQ ID NO:71)	(SEQ ID NO:72)	
PRK2	TFCGTPEFLAPE	FRDFDY	(AAC50208)
	(SEQ ID NO:73)	(SEQ ID NO:74)	
p70-S6Kα	TFCGTIEYMAPE	FLGFTY	(AAA36410)
	(SEQ ID NO:75)	(SEQ ID NO:76)	
p70-S6Kβ	TFCGTIEYMAPE	FLGFTY	(4506739)
	(SEQ ID NO:77)	(SEQ ID NO:78)	
p90-RSK1	SFCGTVEYMAPE	FRGFSF	(I38556)
	(SEQ ID NO:79)	(SEQ ID NO:80)	
p90-RSK2	SFCGTVEYMAPE	FRDFSF	(P51812)
	(SEQ ID NO:81)	(SEQ ID NO:82)	
p90-RSK3	SFCGTIEYMAPE	FRGFSF	(CAA59427)
	(SEQ ID NO:83)	(SEQ ID NO:84)	
MSK1	SFCGTIEYMAPD	FQGYSF	(AAC31171)
	(SEQ ID NO:85)	(SEQ ID NO:86)	
MSK2	SFCGTIEYMAPE	FQGYSF	(AAC67395)
	(SEQ ID NO:87)	(SEQ ID NO:88)	
PDK1	SFVGTAQYVSPE	(1)	(AF017995)
	(SEQ ID NO:89)		

Table 2. Alignment of the amino acid sequences surrounding the T-loop and the hydrophobic motif of AGC kinases. All the sequences and accession numbers are from human proteins.   The underlined residues correspond to those that become phosphorylated. Footnotes: (1) PDK1 does not possess a hydrophobic motif.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide which consists of the amino acid sequence of the

protein kinase PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase as the case may be) sequence referred to above or naturally occurring allelic variants thereof. It is preferred that the naturally occuring allelic variants are mammalian, preferably human, but may alternatively be homologues from parasitic or pathogenic or potentially pathogenic organisms. Examples of such organisms and homologues, and of uses of modulators of such homologues are given in US patent application No 60/112,114, filed on 14 December 1998, and applications claiming priority therefrom, or in Casamayor *et al* (1999) *Curr Biol* **9**, 186-197.

The PDK1 may also be a polypeptide with the amino acid sequence of residues 51 to 359 or 404 (or 71 to 360) of full-length human PDK1; this may comprise the protein kinase domain of PDK1, as described in Example 2. The PDK1 (or SGK, PKB, PKA or p70 S6 kinase) may also be Myc epitope-tagged or His-tagged, as described in Example 1. The p70 S6 kinase, for example, may have a His tag at its N-terminus and/or may lack the carboxy terminal 104 residues (p70 S6K-T2). The PDK1 or SGK may be a *Saccharomyces cerevisiae* homologue, for example Pkh1 or Pkh2 (PDK1 homologues) or Ypk1 or Yrk2 (SGK homologues), as described in Casamayor *et al* (1999) *Curr Biol* **9**, 186-197.

It is particularly preferred, although not essential, that the variant or fragment or derivative or fusion of the PDK1, or the fusion of the variant or fragment or derivative has at least 30% of the enzyme activity of full-length human PDK1 with respect to the phosphorylation of full-length human PKBα on residue Thr308 or SGK1 on residue Thr 256 in either the presence or absence of PtdIns(3,4,5)P$_3$ or PtdIns(3,4)P$_2$. It is more preferred if the variant or fragment or derivative or fusion of the said protein kinase, or the fusion of the variant or fragment or derivative has at least 50%, preferably at least 70% and more preferably at least 90% of the enzyme activity of

PDK1 with respect to the phosphorylation of PKBα or SGK1. However, it will be appreciated that variants or fusions or derivatives or fragments which are devoid of enzymatic activity may nevertheless be useful, for example by interacting with another polypeptide. Thus, variants or fusions

5   or derivatives or fragments which are devoid of enzymatic activity may be useful in a binding assay, which may be used, for example, in a method of the invention in which modulation of an interaction of a mutated PDK1 of the invention and optionally also PDK1 with a interacting polypeptide or compound, for example an interacting polypeptide comprising the amino

10   acid sequence motif Phe/Tyr-Xaa-Xaa-Phe/Tyr (SEQ ID NO:92), for example Phe/Tyr-Xaa-Xaa-Phe/Tyr-Zaa-Phe/Tyr (SEQ ID NO:93), for example Phe/Tyr-Xaa-Xaa-Phe/Tyr-Asp/Glu-Phe/Tyr (SEQ ID NO:94) or Phe/Tyr-Xaa-Xaa-Phe/Tyr-PhosphoSer/PhosphoThr-Phe/Tyr (SEQ ID NO: 95) is measured.

15

It is preferred that the variant or fragment or derivative or fusion of the said hydrophobic/phosphate binding pocket-containing protein kinase, or the fusion of the variant or fragment or derivative comprises a hydrophobic pocket and a phosphate binding pocket in the position equivalent to the

20   hydrophobic and phosphate binding pocket of human PDK1, as discussed further below.

Equivalent preferences apply to a variant or fragment or derivative or fusion of the SGK, PKB, p70 S6 kinase, p90 RSK, PKCα, PKCδ, PKCζ or PRK2

25   (for example), or the fusion of the variant or fragment or derivative, with the substitution in relation to SGK, PKB and p70S6 kinase of the peptide substrate Crosstide (GRPRTSSFAEG, SEQ ID NO:96), or for PKB and SGK of the peptide substrate RPRAATF; the subsitution in relation to PKA of the peptide substrate Kemptide (LRRASLG, SEQ ID NO:97); the

30   substitution in relation to PKC isoforms and PRK1/2 of histone H1; and the

substitution in relation to MSK1/2 or p90-RSK1/2/3 of CREBtide (EILSRRPSYRK, SEQ ID NO:98).

By "variants" of a polypeptide we include insertions, deletions and substitutions, either conservative or non-conservative. In particular we include variants of the polypeptide where such changes do not substantially alter the activity of the said polypeptide, for example the protein kinase activity of PDK1, as described above.

By "conservative substitutions" is intended combinations such as Gly, Ala; Val, Ile, Leu; Asp, Glu; Asn, Gln; Ser, Thr; Lys, Arg; and Phe, Tyr.

The three-letter amino acid code of the IUPAC-IUB Biochemical Nomenclature Commission is used herein, with the exception of the symbol Zaa (negatively charged amino acid). In particular, Xaa represents any amino acid. It is preferred that Xaa and Zaa represent a naturally occuring amino acid. It is preferred that at least the amino acids corresponding to the consensus sequences defined above are L-amino acids.

It is particularly preferred if the PDK1 (or SGK, PKB, PKA or p70 S6 kinase or other hydrophobic/phosphate binding pocket-containing kinase as defined above) variant has an amino acid sequence which has at least 65% identity with the amino acid sequence of PDK1 referred to above (or the sequence for SGK (including SGK1, 2 and 3), PKB, PKA or p70 S6 kinase, for example, as appropriate, referred to above), more preferably at least 70%, 71%, 72%, 73% or 74%, still more preferably at least 75%, yet still more preferably at least 80%, in further preference at least 85%, in still further preference at least 90% and most preferably at least 95% or 97% identity with the amino acid sequence defined above.

It is still further preferred if the PDK1 (or SGK, PKB, PKA or p70 S6 kinase or other hydrophobic/phosphate binding pocket-containing kinase, as defined above) variant has an amino acid sequence which has at least 65% identity with the amino acid sequence of the catalytic domain, particularly

5   the residues forming the hydrophobic pocket, of PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) in the appropriate sequence referred to above, more preferably at least 70%, 71%, 72%, 73% or 74%, still more preferably at least 75%, yet still more preferably at least 80%, in further preference at least 83 or 85%, in still further preference at least 90% and

10 most preferably at least 95% or 97% identity with the amino acid sequence defined above. It will be appreciated that the catalytic domain of a protein kinase-related polypeptide may be readily identified by a person skilled in the art, for example using sequence comparisons as described below.

15 The percent sequence identity between two polypeptides may be determined using suitable computer programs, for example the GAP program of the University of Wisconsin Genetic Computing Group and it will be appreciated that percent identity is calculated in relation to polypeptides whose sequence has been aligned optimally.

20

The alignment may alternatively be carried out using the Clustal W program (Thompson *et al* (1994) *Nucl Acid Res* **22**, 4673-4680). The parameters used may be as follows:
Fast pairwise alignment parameters: K-tuple(word) size; 1, window size; 5,

25 gap penalty; 3, number of top diagonals; 5. Scoring method: x percent.
Multiple alignment parameters: gap open penalty; 10, gap extension penalty; 0.05.
Scoring matrix: BLOSUM.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide which consists of the amino acid sequence of the protein kinase PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase as the case may be) sequence referred to above or naturally occurring allelic

5   variants thereof. It is preferred that the naturally occuring allelic variants are mammalian, preferably human, but may alternatively be homologues from parasitic or pathogenic or potentially pathogenic organisms. Examples of such organisms and homologues, and of uses of modulators of such homologues are given in US patent application No 60/112,114, filed on 14

10   December 1998, and applications claiming priority therefrom, or in Casamayor *et al* (1999) *Curr Biol* **9**, 186-197.

It is preferred that the PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) is a polypeptide that is capable of interacting with a polypeptide

15   comprising the amino acid sequence motif Phe/Tyr-Xaa-Xaa-Phe/Tyr (SEQ ID NO:92), preferably Phe-Xaa-Xaa-Phe/Tyr, more preferably Phe-Xaa-Xaa-Phe, still more preferably Phe/Tyr-Xaa-Xaa-Phe/Tyr-Xaa-Phe/Tyr (SEQ ID NO:93) or Phe/Tyr-Xaa-Xaa-Phe/Tyr-COOH, for example the polypeptide PIF or PIFtide, as defined below. Further preferences for the

20   said polypeptide are as given above.

The protein kinase activity of PKB, SGK or p70 S6 kinase that is modulated may be phosphorylation of the underlined residue in a polypeptide with the amino acid sequence Arg-Xaa-Arg-Xaa-Xaa-<u>Ser/Thr</u> (SEQ ID NO:100).

25   The polypeptide may be Glycogen Synthase Kinase 3 (GSK3), 40 S ribosomal subunit S6, BAD, 6-phosphofructo-2-kinase, phosphodiesterase3b, human caspase 9, endothelial nitric oxide synthase or BRCA1.

A compound identified by a method of the invention may modulate the ability of the protein kinase to phosphorylate different substrates, for example different naturally occuring polypeptides, to different extents. The compound may inhibit the protein kinase activity in relation to one substrate but may increase the protein kinase activity in relation to a second substrate. For example, the protein kinase activity of PDK1 may be modulated to a different extent for PKB when compared with SGK, p70 S6 kinase and/or PKC.

It will be appreciated that the modulatory, for example inhibitory action of a compound found to bind (or inhibit binding of a polypeptide or compound) to the protein kinase may be confirmed by performing an assay of enzymic activity (for example PDK1 and/or PDK2 protein kinase activity) in the presence of the compound.

By "hydrophobic pocket-containing protein kinase having a hydrophobic pocket (PIF binding pocket) in the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150," is meant a polypeptide having an amino acid sequence identifiable as that of a protein kinase catalytic domain, and further having a predicted or determined three-dimensional structure that includes a hydrophobic pocket corresponding to the region indicated in Example 1 as the PIF binding pocket, and a pocket corresponding to the region indicated in Example 1 as the phosphate binding pocket. The hydrophobic pocket and phosphate binding pockets in PDK1 do not overlap with the ATP or phosphorylation site binding sites on PDK1.

It is preferred that the protein kinase has identical or conserved residues that are equivalent to Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of human PDK1, more preferably at least Lys115 and Leu155 of human PDK1, most preferably an identical residue equivalent to Leu155. Thus, for example, the protein kinase may have a Lys residue at the position equivalent to Lys115 of PDK1 and/or a Leu residue at the position equivalent to Leu155 of PDK1. It is preferred that the protein kinase does not have an Ala at the position equivalent to Lys115 and/or a Ser, Asp or Glu at the position equivalent to Leu155 of PDK1.

It is further preferred that the protein kinase has identical or conserved residues that are equivalent to Lys76, Arg131, Thr148 and/or Gln 150 of human PDK1, more preferably at least Lys76 and Gln150 of human PDK1, most preferably an identical residue equivalent to Gln150. Figure 5B shows an alignment of examples of protein kinases considered to have a phosphate binding pocket at the position equivalent to the said phosphate binding pocket of PDK1. Sequence conservation/preferred residues at the positions identified are discussed further in Example 1.

An amino acid sequence may be identifiable as that of a protein kinase catalytic domain by reference to sequence identity or similarities of three dimensional structure with known protein kinase domains, as known to those skilled in the art.

Protein kinases show a conserved catalytic core, as reviewed in Johnson *et al* (1996) *Cell*, **85**, 149-158 and Taylor & Radzio-Andzelm (1994) *Structure* **2**, 345-355. This core folds into a small N-terminal lobe largely comprising anti-parallel β-sheet, and a large C-terminal lobe which is mostly α-helical.

A deep cleft at the interface between these lobes is the site of ATP binding, with the phosphate groups near the opening of the cleft.

Protein kinases also show conserved sequences within this catalytic core, and the residue equivalent to a given residue of, for example, PDK1, may be identified by alignment of the sequence of the kinase with that of known kinases in such a way as to maximise the match between the sequences. The alignment may be carried out by visual inspection and/or by the use of suitable computer programs, for example the GAP program of the University of Wisconsin Genetic Computing Group, which will also allow the percent identity of the polypeptides to be calculated. The Align program (Pearson (1994) in: Methods in Molecular Biology, Computer Analysis of Sequence Data, Part II (Griffin, AM and Griffin, HG eds) pp 365-389, Humana Press, Clifton).

The comparison of amino acid sequences or three dimension structure (for example from crystallography or computer modelling based on a known structure) may be carried out using methods well known to the skilled man, for example as described in WO 01/44497.

MAP kinase, MEK1, Cdk2 and Erk2 (for example) are not protein kinases having a hydrophobic pocket in the position equivalent to the hydrophobic (PIF binding) pocket of PDK1. MEK1, Cdk2 and ERK2 may have a larger hydrophobic pocket which interacts with an amino acid sequence motif (which may be Phe-Xaa-Phe-Pro, SEQ ID NO:101) which is not Phe-Xaa-Xaa-Phe (SEQ ID NO:99). Thus, these protein kinases do not have a hydrophobic pocket in the position equivalent to the said hydrophobic (PIF-binding) pocket of PDK1.

A further aspect of the invention provides a mutated protein kinase, wherein the protein kinase before mutation has a hydrophobic pocket in the position equivalent to the hydrophobic pocket (PIF-binding pocket) of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further has a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148 and/or Gln150, and wherein one or more residues equivalent to Ile118, Val124, Val127, Lys76 or Thr148 forming part of the hydrophobic pocket or phosphate binding pocket of the protein kinase is mutated. It is preferred that the said protein kinase is PDK1. The said protein kinase may alternatively be, for example, SGK, PKB or p70 S6 kinase. It is particularly preferred that the residue at the position equivalent to residue Lys76 of PDK1 is mutated to an Ala. The mutated protein kinase may be useful in determining whether a polypeptide or compound interacts with the hydrophobic (PIF binding) pocket or phosphate binding pocket of the unmutated protein kinase. For example, the abilities of a compound (including polypeptide) to bind to the mutated and unmutated protein kinase, or to modulate the activity of the protein kinase towards one or more substrates of the protein kinase, may be measured and compared.

The mutated protein kinase may alternatively or in addition be mutated at a residue forming part of the "hydroxyl-pocket" discussed in Example 6, for example the residue equivalent to Thr222 and/or Gln 220 of full length human PDK1. These residues are involved in the binding of the UCN-01 7-hydroxyl group.

A further aspect of the invention provides a polynucleotide encoding a mutated protein kinase of the invention. A still further aspect of the invention provides a recombinant polynucleotide suitable for expressing a

mutated protein kinase of the invention. A yet further aspect of the invention provides a host cell comprising a polynucleotide of the invention.

A further aspect of the invention provides a method of making a mutated protein kinase of the invention, the method comprising culturing a host cell of the invention which expresses said mutated protein kinase and isolating said mutated protein kinase.

A further aspect of the invention provides a mutated protein kinase obtainable by the above method.

Examples of these aspects of the invention are provided in Example 1, and may be prepared using routine methods by those skilled in the art, for example as described in WO 00/35946.

For example, the above mutated protein kinase may be made by methods well known in the art and as described below and in Example 1 or 2, for example using molecular biology methods or automated chemical peptide synthesis methods.

It will be appreciated that peptidomimetic compounds may also be useful. Thus, by "polypeptide" or "peptide" we include not only molecules in which amino acid residues are joined by peptide (-CO-NH-) linkages but also molecules in which the peptide bond is reversed. Such retro-inverso peptidomimetics may be made using methods known in the art, for example such as those described in Mézière *et al* (1997) *J. Immunol.* 159, 3230-3237, incorporated herein by reference. This approach involves making pseudopeptides containing changes involving the backbone, and not the orientation of side chains. Retro-inverse peptides, which contain NH-CO

bonds instead of CO-NH peptide bonds, are much more resistant to proteolysis.

Similarly, the peptide bond may be dispensed with altogether provided that an appropriate linker moiety which retains the spacing between the Cα atoms of the amino acid residues is used; it is particularly preferred if the linker moiety has substantially the same charge distribution and substantially the same planarity as a peptide bond.

It will be appreciated that the peptide may conveniently be blocked at its N- or C-terminus so as to help reduce susceptibility to exoproteolytic digestion.

The invention further provides a method of identifying a compound that modulates the protein kinase activity of a protein kinase having a hydrophobic pocket and phosphate binding pocket in the positions equivalent to the hydrophobic (PIF binding) pocket and phosphate binding pocket of PDK1, as defined above (for example PDK1), comprising the step of determining the effect of the compound on the protein kinase activity of, or ability of compound to bind to the said mutated protein kinase of the invention.

The method may further comprise determining the effect of the compound on the protein kinase activity of, or ability of the compound to bind to, the protein kinase (for example PDK1) which is not mutated at the said residue. When the protein kinase is PDK1, it may lack a functional PH domain (ie it may lack a PH domain capable of binding a phosphoinositide).

It will be appreciated that the protein kinase or mutated protein kinase may be a fusion protein comprising a tag, for example to aid purification, for example a GST tag, as described in Example 1.

The capability of the said PDK1 (or, for example, SGK, PKB, PKA or p70 S6 kinase) polypeptide with regard to interacting with or binding to a polypeptide or other compound may be measured by any method of detecting/measuring a protein/protein interaction or other compound/protein interaction, as discussed further below. Suitable methods include methods analagous to those described in Example 1, as well as other methods, for example yeast two-hybrid interactions, co-purification, ELISA, co-immunoprecipitation and surface plasmon resonance methods. Thus, the said PDK1 (or SGK, PKB, PKA or p70 S6 kinase) may be considered capable of binding to or interacting with a polypeptide or other compound if an interaction may be detected between the said PDK1 polypeptide and the said interacting polypeptide by ELISA, co-immunoprecipitation or surface plasmon resonance methods or by a yeast two-hybrid interaction or copurification method, for example as described in Example 1.

It is preferred that the interaction can be detected using a surface plasmon resonance method, as described in Example 1. The interacting polypeptide (for example a polypeptide comprising a phosphorylated "hydrophobic motif", for example S6K-pHM; see example 1) may be immobilised on the test surface, for example it can be coupled through amino groups to a SensorChip CM5™, according to the manufacturer's instructions, or a biotinylated polypeptide can be bound to an avidin coated SensorChip SA. The protein kinase (at concentrations between, for example 0 and between 10µM and 1.0µM, for example 2µM) is then injected over the surface and steady state binding determined in each case. From these measurements a K_d can be determined. It is preferred that the interaction has a K_d of less than 8µM, more preferably less than 5µM, 2µM, 1µM, 500nM, 300nM, 200nM or 100nM, for example about 150nM. Alternatively, a K_d can be determined for a polypeptide or other compound in competition with the immobilised polypeptide (or other compound). The protein kinase (for

example at a concentration of 0.5μM) is mixed with free polypeptide (for example, at concentrations between 0 and 3μM) and the mixture injected over the immobilised polypeptides. The steady state binding is determined in each case, from which the K_d of the interaction can be determined using the Cheng-Prescott relationship. Alternatively, the interaction may be expressed in terms of an observed response or relative observed responses, measured in terms of mass of protein bound to the surface, as described in Example 2. For example, the polypeptide may be immobilised by amino coupling to a SensorChip CM5 and each protein kinase (for example different mutated protein kinases, as discussed below) for example at a concentration of 1.0μM or a range of concentrations, injected over the immobilised polypeptide. Alternatively, the polypeptide may be immobilised on a SA SensorChip and each protein kinase, for example at a concentration of 40nM or a range of concentrations injected over the immobilised polypeptide. The steady state response for each protein kinase is determined, for example expressed in Response Units (RU). 1000RU corresponds to 1 ng/mm^2 of protein bound to the surface. A response of less than 10RU may indicate that no interaction has taken place. A response of at least 10RU may indicate that the immobilised and injected molecules interact with each other.

It will be appreciated that the above methods may be used to determine whether a particular polypeptide or compound interacts with a protein kinase or mutated protein kinase.

The effect of the compound on the rate or degree of phosphorylation of a hydrophobic pocket and/or phosphate binding pocket-dependent substrate may be determined. A compound may be selected that decreases the protein kinase activity of the said protein kinase, for example PDK1,

towards a hydrophobic pocket-dependent substrate or a phosphate binding pocket-dependent substrate and does not affect or increases the protein kinase activity towards a hydrophobic pocket or phosphate binding pocket-independent substrate, for example PKB when the kinase is PDK1. An activator of PDK1 may mimic insulin and may be useful in treating diabetes or obesity, and may protect cells from apoptosis.

Compounds that bind specifically to the phosphate binding site may activate PDK1 (or other AGK kinase having a phosphate binding site). Also compounds that bind to the residues forming part of the pohsphate binding site might transduce the negative effect and inhibit the kinase activity. A compound interacting with the phosphate binding site of PDK1 may be an activator, but only of a subset of substrates. Some substrates of PDK1 require the interaction with the phosphate binding site, such as S6K and SGK.

To generate a specific molecule that could bind to the phosphate and/or PIF-binding pocket of PDK1 a anti-idiotype strategy using combinatorial RNA libraries could be employed. Previous studies have established that Combinatorial RNA libraries can be used to isolate specific ligands, called aptamers, for virtually any target molecule by a procedure probably best known as SELEX (Ellington, A. D., and Szostak, J. W. (1990) Nature 346, 818-822; Tuerk, C., and Gold, L. (1990) Science 249, 505-510). Using this approach RNA molecules that interact with antibodies raised against PIFtide or peptides that encompass the hydrophobic motif of AGC kinases which are phosphorylated at their hydrophobic motif would be selected (preferably antibodies that are specific for the phosphorylated form ie bind the phosphorylated form but not the non-phosphorylated form). These RNA species then may have the intrinsic conformation to interact with the phosphate binding (and possibly also the PIF-binding) pocket(s) of PDK1.

Antibodies to the phosphate binding pocket may be produced. For example, animals could be immunised with wild type PDK1. Serum could then be purified with a column where the resin is coated with wild type PDK1 used

5 for the immunisation. Specific antibodies could then be passed through columns coated with mutant PDK1 molecules differing only in that they have specific mutations in the phosphate binding pocket, such as Arg131, Lys76 or Gln150, for example mutated to Ala. Antibodies that don't bind to this mutant will either be specific antibodies that recognise the specific

10 motifs or antibodies that are sensitive to the conformational changes associated with these mutations. The opposite development could also be performed: antibodies against a mutant PDK1 having a specific mutation(s) in the phosphate binding pocket, such as Arg131, Lys76 or Gln150, for example mutated to Ala, could be produced and the serum further purified

15 through columns coated with wild type PDK1.

Thus, a further aspect of the invention provides an antibody reactive with the phosphate binding pocket of PDK1 or other hydrophobic pocket (PIF binding pocket)-containing protein kinase having a hydrophobic pocket in

20 the position equivalent to the hydrophobic pocket of human PDK1 that is defined by residues including Lys115, Ile118, Ile119, Val124, Val127 and/or Leu155 of full-length human PDK1 and further having a phosphate binding pocket in the position equivalent to the phosphate binding pocket of human PDK1 that is defined by residues including Lys76, Arg131, Thr148

25 and/or Gln150. A further aspect of the invention provides an antibody reactive with PDK1 or other phosphate-binding pocket–containing protein kinase as defined above but not with the said protein kinase mutated at the phosphate binding site, or *vice versa*. A further aspect of the invention provides a method for preparing or selecting an antibody wherein the

30 antibody is prepared or selected against a said protein kinase (for example

PDK1) unmutated at the phosphate binding site and a said protein kinase mutated at the phosphate binding site.

By the term "antibody" is included synthetic antibodies and fragments and variants (for example as discussed above) of whole antibodies which retain the antigen binding site. The antibody may be a monoclonal antibody, but may also be a polyclonal antibody preparation, a part or parts thereof (for example an F_{ab} fragment or $F(ab')_2$) or a synthetic antibody or part thereof. Fab, Fv, ScFv and dAb antibody fragments can all be expressed in and secreted from *E. coli*, thus allowing the facile production of large amounts of the said fragments. By "ScFv molecules" is meant molecules wherein the V_H and V_L partner domains are linked via a flexible oligopeptide. IgG class antibodies are preferred.

Suitable monoclonal antibodies to selected antigens may be prepared by known techniques, for example those disclosed in "Monoclonal Antibodies: A manual of techniques", H. Zola (CRC Press, 1988) and in "Monoclonal Hybridoma Antibodies: techniques and Applications", JGR Hurrell (CRC Press, 1982), modified as indicated above. Bispecific antibodies may be prepared by cell fusion, by reassociation of monovalent fragments or by chemical cross-linking of whole antibodies. Methods for preparing bispecific antibodies are disclosed in Corvalen *et al*, (1987) *Cancer Immunol. Immunother.* **24**, 127-132 and 133-137 and 138-143.

A general review of the techniques involved in the synthesis of antibody fragments which retain their specific binding sites is to be found in Winter & Milstein (1991) *Nature* **349**, 293-299.

For example, an antibody that does not bind PDK1 Arg131Ala could be specifically recognising this residue in the phosphate binding site, but could

also be recognising specifically the inactive conformation of PDK1, which is stabilised by Arg 131. The opposite development could also be performed: antibodies against a mutant PDK1 Arg131Ala could be produced and the serum further purified through columns coated with wild type PDK1. In this way, antibodies may be prepared that would either not be able to interact with the phosphate binding site Arg 131 but only when a small residue is in its place, or antibodies that are probes for the active conformation of PDK1. These conformational probes could be used in high throughoutput screenings, HTS, in the search of compounds that are capable of modifying the conformation of the given protein kinase. Antibodies could have been produced with previous knowledge to detect active protein kinases by immunising with active protein kinases, but in those cases, the antibodies would have recognised also the phosphorylation events that make a protein kinase be active. In the methodology here described using antibodies, the conformational probes could be easily isolated. Furthermore, antibodies obtained from an active protein kinase (with overall modifications that make it active) could be further purified through a column coated with the inactive protein kinase (keeping the non bound fraction) and then further purifyied on a column coated with a protein kinase consisting of an activating mutation (such as R131A in the case of PDK1), retaining the specifically bound fraction, which could be an active conformation probe. This type of approach could also allow the development of conformation specific probes by the use of activating or inhibiting mutations.

A further aspect of the invention provides a kit of parts useful in carrying out a method according to the preceding aspect of the invention, comprising (1) a mutated protein kinase of the invention and (2) the protein kinase which is not a mutated said protein kinase as defined above.

The protein structures described herein (for example with the co-ordinates shown in Examples 2, 3 or 4, or structures modelled thereon) may be useful in designing further reagents that may be useful in drug screening assays or characterisation of protein kinase activity or regulation. For example, such structures may be useful in designing mutants that may be useful in FRET-based activities, for example in which surface residues near to binding sites are mutated to cysteines to allow coupling of chromophores. For example, the cysteine residue may be fluorescently-labelled, and a change in fluorescence intensity or frequency may be detected in an assay. Any thiol-reactive fluorophore, for example BADAN (see, for example, Wadum et al Fluorescently labeled bovine acyl-CoA binding protein – an acyl-CoA sensor. Interaction with CoA and acyl-CoA esters and its use in measuring free acyl CoA esters and non-esterified fatty acids (NEFA); Hammarstrom et al (2001) *Biophys J* **80(6)**, 2867-2885; Schindel *et al* (2001) *Eur J Biochem* **268(3)**, 800-808), could be used to label the cysteine.   An alternative suitable fluorophore is Acrylodan (Richieri et al (1992) *J Biol Chem* **267(33)**, 23495-23501).

It will be appreciated that the invention provides screening assays for drugs which may be useful in modulating, for example either enhancing or inhibiting, the protein kinase activity of a protein kinase (for example, the protein kinase activity towards a particular substrate) having a hydrophobic pocket in the position equivalent to the hydrophobic pocket of Protein Kinase A (PKA) that is defined by residues including Lys76, Leu116, Val80 and/or Lys111 of full-length mouse PKA, for example PDK1, SGK, PKB, PKA or p70 S6 kinase, for example the PDK1 or PDK2 activity (as discussed above) of PDK1. The compounds identified in the methods may

themselves be useful as a drug or they may represent lead compounds for the design and synthesis of more efficacious compounds.

The compound may be a drug-like compound or lead compound for the development of a drug-like compound for each of the above methods of identifying a compound. It will be appreciated that the said methods may be useful as screening assays in the development of pharmaceutical compounds or drugs, as well known to those skilled in the art.

The term "drug-like compound" is well known to those skilled in the art, and may include the meaning of a compound that has characteristics that may make it suitable for use in medicine, for example as the active ingredient in a medicament. Thus, for example, a drug-like compound may be a molecule that may be synthesised by the techniques of organic chemistry, less preferably by techniques of molecular biology or biochemistry, and is preferably a small molecule, which may be of less than 5000 daltons. A drug-like compound may additionally exhibit features of selective interaction with a particular protein or proteins and be bioavailable and/or able to penetrate cellular membranes, but it will be appreciated that these features are not essential.

The term "lead compound" is similarly well known to those skilled in the art, and may include the meaning that the compound, whilst not itself suitable for use as a drug (for example because it is only weakly potent against its intended target, non-selective in its action, unstable, difficult to synthesise or has poor bioavailability) may provide a starting-point for the design of other compounds that may have more desirable characteristics.

It is appreciated that screening assays which are capable of high throughput operation are particularly preferred. Examples may include cell based

assays and protein-protein binding assays. An SPA-based (Scintillation Proximity Assay; Amersham International) system may be used. For example, beads comprising scintillant and a substrate polypeptide or interacting polypeptide may be prepared. The beads may be mixed with a
5   sample comprising ^{32}P- or ^{33}P-γ-labelled PDK1 or other protein kinase or mutated protein kinase (as defined above) and with the test compound. Conveniently this is done in a 96-well or 384-well format. The plate is then counted using a suitable scintillation counter, using known parameters for ^{32}P or ^{33}P SPA assays. Only ^{32}P or ^{33}P that is in proximity to the scintillant,
10   i.e. only that bound to the substrate or interacting polypeptide that is bound to the beads, is detected. Variants of such an assay, for example in which the substrate or interacting polypeptide is immobilised on the scintillant beads *via* binding to an antibody or antibody fragment, may also be used.

It will be understood that it will be desirable to identify compounds that
15   may modulate the activity of the protein kinase *in vivo*. Thus it will be understood that reagents and conditions used in the method may be chosen such that the interactions between, for example, the said protein kinase and the interacting polypeptide, are substantially the same as between the human protein kinase and a naturally occuring interacting polypeptide
20   comprising the said amino acid sequence. It will be appreciated that the compound may bind to the protein kinase, or may bind to the interacting polypeptide.

The compounds that are tested in the screening methods of the assay or in
25   other assays in which the ability of a compound to modulate the protein kinase activity of a protein kinase, for example a hydrophobic pocket-containing protein kinase, as defined above, may be measured, may be compounds that have been selected and/or designed (including modified)

using molecular modelling techniques, for example using computer techniques.

A further aspect of the invention is a compound identified or identifiable by the above selection/design methods of the invention, for example an RNA molecule or antibody identifiable as defined above.

A still further aspect of the invention is a compound (or polypeptide or polynucleotide) of the invention or identified or identifiable by the above selection/design methods of the invention, for use in medicine. Conditions or diseases in which such compounds, polypeptides or polynucleotides may be useful are indicated below.

The compound (or polypeptide or polynucleotide) may be administered in any suitable way, usually parenterally, for example intravenously, intraperitoneally or intravesically, in standard sterile, non-pyrogenic formulations of diluents and carriers. The compound (or polypeptide or polynucleotide) may also be administered topically, which may be of particular benefit for treatment of surface wounds. The compound (or polypeptide or polynucleotide) may also be administered in a localised manner, for example by injection. The compound may be useful as an antifungal (or other parasitic, pathogenic or potentially parasitic or pathogenic organism) agent.

A further aspect of the invention is the use of a compound (or polypeptide or polynucleotide) as defined above in the manufacture of a medicament for the treatment of a patient in need of modulation of signalling by a protein kinase having a hydrophobic/phosphate binding pocket, as defined above, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6

kinase/PRK2/PKC signalling. The patient may be in need of inhibition of a said hydrophobic/phosphate binding pocket-containing kinase in an infecting organism, for example the patient may have a fungal infection for which treatment is required. The compound may inhibit the infecting organism's (for example fungal) hydrophobic/phosphate binding pocket-containing protein kinase, but may not inhibit the patient's equivalent hydrophobic/phosphate binding pocket-containing protein kinase.

A further aspect of the invention is a method of treating a patient in need of modulation of signalling by a protein kinase having a hydrophobic/phosphate binding pocket as defined above, for example PDK1, SGK, PKB or p70 S6 kinase, for example insulin signalling pathway and/or PDK1/PDK2/SGK/PKB/p70 S6 kinase/PRK2/PKC signalling, wherein the patient is administered an effective amount of a compound (or polypeptide or polynucleotide) as defined above.

A compound that is capable of reducing the activity of PKC, for example PKCβ, PRK1 or 2, PDK1 (ie the PDK1 and/or the PDK2 activity), PKB, SGK or p70 S6 kinase may be useful in treating cancer. PDK1, for example via PKB and/or SGK, may be capable of providing a survival signal that protects cells from apoptosis induced in a variety of ways (reviewed in Cross *et al* (1995) *Nature* **378**, 785-789 and Alessi & Cohen (1998) *Curr. Opin. Genetics. Develop.* **8**, 55-62). Thus, such compounds may aid apoptosis. Reduction of the activity of PDK1, PKB, SGK and/or p70 S6 kinase may promote apoptosis and may therefore be useful in treating cancer. Conditions in which aiding apoptosis may be of benefit may also include resolution of inflammation.

A compound is capable of increasing the activity of PDK1, PKB, SGK or p70 S6 kinase may be useful in treating diabetes or obesity, or may be

useful in inhibiting apoptosis. Increased activity of PDK1, PKB, SGK or p70 S6 kinase may lead to increased levels of leptin, as discussed above, which may lead to weight loss; thus such compounds may lead to weight loss. For example, such compounds may suppress apoptosis, which may aid cell survival during or following cell damaging processes. It is believed that such compounds are useful in treating disease in which apoptosis is involved. Examples of such diseases include, but are not limited to, mechanical (including heat) tissue injury or ischaemic disease, for example stroke and myocardial infarction, neural injury and myocardial infarction. Thus the patient in need of modulation of the activity of PDK1, PKB, SGK or p70 S6 kinase may be a patient with cancer or with diabetes, or a patient in need of inhibition of apoptosis, for example a patient suffering from tissue injury or ischaemic injury, including stroke.

Thus, a further aspect of the invention provides a method of treating a patient with an ischaemic disease the method comprising administering to the patient an effective amount of a compound identified or identifiable by the screening methods of the invention.

A still further invention provides a use of a compound identifiable by the screening methods of the invention in the manufacture of a medicament for treating an ischaemic disease in a patient.

Thus, a further aspect of the invention provides a method of treating a patient with an ischaemic disease the method comprising administering to the patient an effective amount of a compound identifiable by the screening methods of the invention.

If the patient is a patient in need of promotion of apoptosis, for example a patient with cancer, it is preferred that the compound of the invention that is

used in the preparation of the medicament is capable of reducing the activity of PDK1, PKB, SGK or p70 S6 kinase. If the patient is a patient with diabetes or a patient in need of inhibition of apoptosis, for example a patient with ischaemic disease, it is preferred that the compound of the invention that is used in the preparation of the medicament is capable of increasing the activity of PDK1, PKB, SGK or p70 S6 kinase.

All documents referred to herein are hereby incorporated by reference.

The invention is now described in more detail by reference to the following, non-limiting, Figures and Examples.

Figure legends

1. Overview of the PDK1 structure.
The PDK1 kinase domain backbone is shown in a ribbon representation, with the secondary structure elements for residues 74-163 in the lower half of the Figure and for residues 164- 358 in the upper part of the Figure. Helix αG, encompassing residues 287-295 (which makes a crystal contact to a symmetry related PDK1 molecule, Fig. 2), is at the bottom right of the Figure. Key residues discussed in the text are shown as a sticks model. ATP is shown as a sticks model. A simulated annealing |Fo −|Fc`, φ calc map is shown in black, contoured at 3 σ . The phosphoserine and the sulphate discussed in the text are also shown.

2. The PIF-pocket
A. A surface representation of the putative PIF binding pocket is shown and compared to the pocket interacting with the C-terminal FXXF (SEQ ID NO: 1) motif in PKA. For PDK1, the αG helix of a symmetry-related molecule

is shown as a ribbon, in PKA the C-terminus is also shown as a ribbon. Aromatic amino acids buried in the pocket are shown as sticks; further side chains interacting with the pocket are also shown as sticks. Helix αC is also shown as a ribbon in both PDK1 and PKA (at bottom of images). In PDK1, the ordered sulphate ion and basic residues interacting with it are also shown.

B. A stereo image of the residues lining the PIF-pocket is shown. The PDK1 backbone is shown as a grey ribbon. Side chains are shown as sticks. Hydrogen bonds to the sulphate ion are shown as black dotted lines.

3. Structure-based sequence alignment

The sequences of PKA (SEQ ID NO: 103) and PDK1 (SEQ ID NO:102) are aligned according to a structural superposition performed in WHAT IF [Vriend, 1990]. Sequence numbering is according to PDK1. β -strands (arrows) and α -helices (bars) are shown for the PDK1 structure according to a DSSP [Kabsch and Sander, 1983] secondary structure assignment, and labelled consistent with the secondary structure element names proposed for PKA [Taylor and Radzioandzelm, 1994]. Residues lining the PIF-pocket are indicated with a black dot. Residues hydrogen bonding the sulphate ion are indicated by arrows. The PDK1 residues equivalent to Ser53 and Gly186 in PKA, are labelled with an asterisk.

4. PDK1 binding & activation studies

Binding and activation of wild type and mutant forms of PDK1 to a phosphopeptide derived from the hydrophobic motif of S6K1. The binding of the wild type (wt) PDK1 and indicated mutants to a phosphopeptide comprising the hydrophobic motif of S6K1 (S6K-pHM: SESANQVFLGFT*YVAPSV, where T* indicates phospho-threonine, SEQ

ID NO:104) was analysed by surface plasmon resonance as described in the Materials and Methods.

A. The sensor chip SA was coated with 12RUs of the biotinylated S6K-pHM peptide and the binding was analysed following injection of 270 nM wild type PDK1, PDK1 [T148A] and PDK1 [K76A]. No detectable binding to S6K-pHM was observed using PDK1 [R131A] or PDK1 [Q150] (data not shown).

B. As in A. except that binding was analysed over a range of PDK1 concentrations (2-2150nM). The response level at the steady state binding is plotted versus the log of the PDK1 concentration. The estimated Kd was obtained by fitting the data to a sigmoid curve using Kaleidagraph software. Kd for wild type PDK1 was 642 – 131 nM, PDK1 [T148A] was 64 – 7 nM and PDK1 [K76A] was 1744 – 167 nM. No detectable binding of PDK1 to the non-phosphorylated S6K-HM peptide (SESANQVFLGFTYVAPSV, SEQ ID NO:105) was detected with wild type PDK1or any of the mutants (data not shown).

C. Activation of the indicated forms of PDK1 by S6K-pHM and S6K-HM. PDK1 activity was measured using the peptide substrate (T308tide) in the presence of the indicated concentrations of S6K-pHM (closed circles) and S6K-HM (open circles) as described in the methods. Assays were performed in triplicate and similar results obtained in 2 separate experiments. The results are the average – SD for a single experiment.

5. Interactions of regulatory phosphates with the αC helix

A. The PDK1 backbone is shown as a ribbon, with helix α C in the centre of the view. Key residues are shown as sticks. The sulphate ion and the phosphate on the activation loop are also shown. A sticks model of ATP is shown. Hydrogen bonds are shown as black dotted lines.

B. Alignment of the amino acid sequence forming part of the phosphate pocket on PDK1 with the equivalent region of the indicated AGC kinases. Identical residues are denoted by white letters on a black background and similar residues by gray boxes. Arrows indicate the residues corresponding to Lys 76, Arg131, Thr148 and Gln150 of PDK1 (SEQ ID NOs:12 and 144). The aligned amino acid sequences are as follows: PKBα (SEQ ID NOs: 13 and 145), S6K1 (SEQ ID NOs: 14 and 146), SGK1 (SEQ ID NOs: 15 and 147), and Rsk1 (SEQ ID NOs: 16 and 148).

6. Essential dynamics

A. Projection of all available PKA crystal structures (labelled dots) and the PDK1 structure (diamond) onto the first two eigenvectors (i.e. the ones with the two largest eigenvalues) calculated from the PKA structures.

B. Graphic representation of the motion along the first eigenvector, generated by projecting two structures at -4 nm (black) and +4 nm (grey).

7. Alignment of AGC protein kinase family members.

The alligned amino acid sequecnces and their respecptive corresponding sequence identifier are as follows:

P70S6Kalpha (SEQ ID NO: 17), P70S6Kbeta (SEQ ID NO: 18), P90RSK1 (SEQ ID NO: 19), P90RSK2 (SEQ ID NO: 20), P90RSK3 (SEQ ID NO: 21), MSK1 (SEQ ID NO: 22), MSK2 (SEQ ID NO: 23), PKBalpha (SEQ ID NO: 24), PKBbeta (SEQ ID NO: 25), PKBgamma (SEQ ID NO: 26), PRK1 (SEQ ID NO: 27), PRK2 (SEQ ID NO: 28), SGK1 (SEQ ID NO: 29), SGK3 (SEQ ID NO: 30), SGK2 (SEQ ID NO: 31), PKCbeta (SEQ ID NO: 32), PKCbetaII (SEQ ID NO: 33), PKCalpha (SEQ ID NO: 34), PKCgamma (SEQ ID NO: 35), PKCzeta (SEQ ID NO: 36), PKCiota (SEQ ID NO: 37), PKCdelta (SEQ ID NO: 38), PKAgamma (SEQ ID NO: 39), and PDK1 (SEQ ID NO: 40).

8. Staurosporine and UCN-01 electron density.

The staurosporine and UCN-01 molecules are shown in a stick representation. Hydrogen bonding atoms (Table 4) are labelled according to [49]. The unbiased | F_o|-|F_c|, ϕ_{calc} maps are contoured at 2.5 σ.

5 **9..Details of the inhibitor binding sites.**

The bridging water molecule is shown as a sphere. Hydrogen bonds are indicated by black dotted lines. Labelled residues hydrogen-bond the inhibitor molecules.

10 **Example 1: High resolution crystal structure of the human PDK1 catalytic domain defines the regulatory phosphopeptide docking site**

The 3-Phosphoinositide Dependent Protein Kinase-1 (PDK1) plays a key role in insulin/growth factor induced signalling pathways through
15 phosphorylation of downstream AGC-kinases such as Protein Kinase B/Akt and p70 ribosomal S6 kinase (S6K1). Here we describe the 2.0 Å crystal structure of the PDK1 kinase domain in complex with ATP. The structure defines the hydrophobic pocket termed the 'PIF-pocket'which plays a key role in mediating the interaction and phosphorylation of certain substrates
20 such as S6K1. In the PDK1 structure, this pocket is occupied by an extensive crystallographic contact with another molecule of PDK1, reminiscent of the interaction of Protein Kinase A with the hydrophobic motif at its C-terminus. Previous studies have shown that phosphorylation of S6K1 at its C-terminal PIF-pocket-interacting motif, promotes the
25 binding of S6K1 with PDK1, suggesting that there may be a phosphate docking site located nearby the PIF-pocket. Interestingly, close to the PIF-pocket on the PDK1 structure, there is an ordered sulphate ion, interacting tightly with four surrounding side chains. The roles of these residues were investigated through a combination of site directed mutagenesis and kinetic
30 studies, the results of which suggest that this region of PDK1 does indeed

represent a phosphate dependent docking site. An analogous phosphate binding regulatory motif may participate in the activation of other AGC kinases.

Results & Discussion

5 *Overall structure*

The structure of the catalytic domain of PDK1 was solved by molecular replacement and refined to an R-factor of 0.19 (Rfree=0.22). PDK1 assumes the classic bilobal kinase fold (Fig. 1) and is similar to the only other AGC kinase structure solved, that of PKA (RMSD of 1.0 Å on C α atoms with
10 PDB entry 1STC [Prade et al., 1997]). The form of PDK1 that was crystallized comprised residues 51 to 359. The tip of the activation loop (residues 233-236) is disordered, as observed in other kinase structures [Johnson et al., 1996]. The N-terminus (residue 51-70), which is pointing into a large void generated by the crystallographic symmetry, is also
15 disordered. In contrast, the N-terminal extension to the kinase domain of PKA assumes an amphipathic a -helix (termed αA-helix), and packs against the kinase core [Knighton et al., 1991]. The cluster of hydrophobic residues that mediates this interaction in PKA is not present in PDK1, suggesting that the N-terminus of PDK1 could have a different function from that of
20 PKA. Interestingly, it has recently been shown that the N-terminus of PDK1 (residues 1-50) interacts with Ral guanine nucleotide exchange factors [Tian et al., 2002]. Thus, this region may assume a unique conformation in PDK1, which is not defined by the structure described here.

25 PDK1 was crystallised in the presence of ATP but in the absence of any divalent cations. In the early stages of the refinement well-defined density for the entire ATP molecule could be observed. ATP adopts a different conformation to that observed in other kinase-ATP complexes (Fig. 1).

Perhaps due to the absence of divalent cations, the generally observed kink between the β and γ phosphate caused by the interaction with such an ion, is not seen in the PDK1 structure.

5   It is known that PDK1 can phosphorylate itself on residue Ser 241 in the activation loop and that this phosphorylation is required for PDK1 activity [Alessi et al., 1997]. Indeed, we observed density for a phosphate attached to this residue (Fig. 1), and extensive interactions are observed between this phosphoserine and residues from the C-terminal lobe and αC-helix (Fig. 1).

10   The interaction between Ser241 and the C-terminal lobe is similar to the equivalent interactions in PKA but as discussed below the binding to the αC-helix differs.

The PIF-pocket

15

As outlined in the introduction, PDK1 was postulated to possess a pocket (the 'PIF-pocket') in the small lobe of its catalytic domain, required for the binding of PDK1 to the hydrophobic motif of its substrates [Biondi et al., 2000]. The PDK1 structure described here indeed reveals such a pocket, and

20   shows that it lies in a location similar to the FXXF (SEQ ID NO:1)-binding pocket in PKA (Fig. 2). PDK1 residues Lys115, Ile118, Ile119 on the αB helix (Fig. 2), Val124, Val127 on the αC helix and Leu155 on β-sheet 5 form an approximately 5 Å deep pocket. Previous work has shown that mutation of Leu 155 to Glu abolishes the ability of PDK1 to interact with a

25   peptide that encompasses the hydrophobic motif of PRK2 (PIFtide) [Biondi et al., 2000] as well as with S6K1, SGK1, PKCζ and PRK2 [Balendran et al., 2000, Biondi et al., 2000]. In addition, mutation of Lys115, Ile119, Glu150, and Leu155 to alanine, reduced the affinity of PDK1 for PIFtide approximately 10-fold, but did not affect the ability to phosphorylate and

activate S6K1 and SGK1 [Biondi et al., 2001]. These results are in agreement with the crystal structure of the PIF-pocket, since Leu155 is located at the center and the other residues line the wall of the pocket (Fig. 2). Interestingly, in our structure, the PIF-pocket is occupied by helix αG of

5   a symmetry related molecule (Fig. 2). Tyr288 and Phe291 make hydrophobic contacts in this pocket with almost all pocket-lining residues, remarkably reminiscent of the interactions of the phenylalanines in the FXXF motif in PKA and their hydrophobic docking site in the equivalent region of the kinase domain (Fig. 2). In addition, residues Glu287, Gln292,

10   Ile295 and Lys296 on the symmetry related loop also form contacts with residues lining the PIF-pocket. In total, 244 ^{2} Å of accessible surface is buried by this contact, suggesting this is a tight interaction. However, the significance of this interaction is not clear as an oligomerisation event for PDK1 has not been demonstrated in solution previously. Indeed both the

15   isolated catalytic domain of PDK1 that was crystallised and full length PDK1 migrate in gel filtration chromatography as apparent monomeric species (data not shown).

The phosphate pocket

20

As outlined in the introduction, substrates of PDK1, such as S6K1, interact with the PIF-pocket of PDK1 with higher affinity when they are phosphorylated at their hydrophobic motif. This suggested that a regulatory phosphate binding site may be located close to the PIF-pocket. During

25   refinement of the PDK1 structure, it became clear that next to the PIF-pocket another small pocket was present, occupied by a tetrahedral oxy-anion (Fig. 2). As 2.0 M of sulphate was present in the crystallisation conditions, this was assigned as a sulphate ion. The ion interacts with four residues lining the pocket, namely Lys76, Arg131, Thr148 and Gln150.

Because of its close proximity to the PIF-pocket (approximately 5Å) it is possible that this sulphate-occupied pocket could represent the binding site for the phosphate on the phosphopeptide. To investigate this further, we mutated Lys76, Arg131, Thr148 and Gln150 to Ala, in order to verify the contribution of each of these residues in enabling PDK1 to interact with a peptide encompassing the hydrophobic motif of S6K1, in which the residue equivalent to Thr412 was phosphorylated (termed S6K-pHM). A quantitative surface plasmon resonance based binding assay (Fig. 4A) showed that wild type PDK1 interacted with S6K-pHM, with a Kd of 0.6 μM with S6K-pHM but not detectably to the non-phosphorylated form of this peptide (S6K-HM). The PDK1[R131A] and PDK1[Q150A] mutants did not detectably interact with S6K-pHM in this assay (Fig. 4B), confirming that the interactions these residues make in the PDK1 structure are of key importance. The PDK1[K76A] mutant interacted with 3-fold lower affinity (Kd 1.7 μM) with S6K-pHM. The PDK1[T148A] mutant however possessed about 10-fold higher (Kd 0.06 μM) affinity for S6K-pHM than wild type PDK1. Moreover, the dissociation of PDK1[T148A] from S6K-pHM is markedly slower than that of wild type PDK1 or PDK1[K76A] (Fig 4A). These findings are unexpected as Thr148 is within hydrogen bonding distance of the sulphate (Fig. 2), but indicate that this residue may play a role in enabling the dissociation of PDK1 from S6K-pHM.

The binding of PDK1 to PIFtide stimulates up to 4-fold the rate at which PDK1 phosphorylates a small peptide that encompasses the activation loop motif of PKB (termed T308tide) [Biondi et al., 2000], indicating that occupancy of the PIF-pocket of PDK1 activates the enzyme. Similarly, the binding of a phosphopeptide corresponding to the hydrophobic motif of RSK stimulated PDK1 activity 6-fold [Frodin et al., 2000]. We have now also found that the binding of S6K-pHM to wild type PDK1 induces a

maximal 5-fold activation, with a half maximal activation occurring at a concentration of approximately 50 μM S6K-pHM (Fig. 4C). We next assayed the specific activities of PDK1[K76A], PDK1[R131A], PDK1[T148A] and PDK1[Q150A] mutants in the absence and presence of increasing concentrations of S6K-pHM (Fig. 4C). The PDK1[K76A] possessed the same specific activity towards T308tide in the absence of S6K-pHM as wild type PDK1, but an approximately 3-fold higher concentration of S6K-pHM was required to half maximally activate PDK1[K76A], consistent with the reduced affinity of this form of PDK1 for S6K-pHM (Fig. 4A,B). The PDK1[R131A] mutant possessed a 3-fold higher specific activity towards Thr308tide in the absence of S6K-pHM (Fig. 4C), as has been observed previously with certain other PIF-pocket mutants of PDK1(PDK1[K115A] and PDK1[L155E]) [Biondi et al., 2000]. However, in accordance with the inability of PDK1[R131A] to bind S6K-pHM in the Biacore assay (Fig. 4B), it was not significantly activated by concentrations of S6K-pHM below 0.1 mM and its activity was only moderately further increased by the addition of high concentrations (0.3 and 1 mM) of S6K-pHM (Fig. 4C). The activity of a mutant of PDK1 in which both Lys76 and Arg131 were changed to Ala was activated even less significantly by these high concentrations of S6K-pHM. The PDK1[T148A] and PDK1[Q150A] mutants possessed similar specific activity towards T308tide as wild type PDK1 in the absence of S6K-pHM. The PDK1[T148A] mutant was activated similarly as wild type PDK1 by S6K-pHM and consistent with the inability of PDK1[Q150A] to interact with S6K-pHM, this mutant of PDK1 was not significantly activated by concentrations of S6K-pHM below 0.1 mM but at 0.3 and 1 mM peptide a 2-3 fold activation was observed (Fig. 4).

At very high peptide concentrations (0.3-1 mM) the non-phosphorylated S6K-HM

peptide induced a small (<2-fold) activation of PDK1 (Fig. 4C). Interestingly, despite the PDK1[K76A] and PDK1[R131A] mutants being markedly less able to interact with the phosphorylated S6K-pHM peptide, than wild type PDK1, high concentrations of the S6K-HM peptide activated PDK1[K76A] and PDK1[R131A] to a similar extent as wild type PDK1, indicating that the ability of these mutants to interact weakly with the S6K-HM peptide was not affected.

We evaluated the sequence conservation in the phosphate pocket of the insulin/growth factor-activated AGC family kinases (PKBα , S6K1, SGK1 and RSK1). Sequence alignments indicate that this pocket is conserved amongst these kinases (Fig 5A). The most conserved residue is Gln150 which is found in all of these AGC kinases and the residue equivalent to Lys76 is always a basic residue (Fig. 5A). Arg131 is conserved in S6K1, SGK1 and RSK1 but not in PKBα , or PKBβ or PKBγ , where it is an Asn or Ser. Thr148 is conserved in PKBα and SGK1 but is an Ala in S6K1 and RSK1. Interestingly, we have found the Thr 148Ala mutation in PDK1 did not disrupt the phosphate pocket (Fig 4). As PKBα , S6K1, SGK1 and RSK1 require to be phosphorylated at their hydrophobic motif to be maximally activated, it is tempting to speculate that the C-terminal hydrophobic motifs of these enzymes, when phosphorylated, bind to their own PIF/phosphate pockets, thereby generating a network of interactions similar to that of PDK1. In support of this, PKBα , S6K1, SGK1 and RSK1 also require phosphorylation of their activation loop at the position equivalent to Ser241 for activity. Consistent with PKA not possessing a phosphate pocket, Lys76 and Gln150 are not conserved in PKA (Fig. 3), and indeed such a pocket is not observed in the PKA structure (Fig. 2).

The αC helix

The PDK1 structure shows that, as in other protein kinases [Johnson et al., 2001, Husen and Kuriyan, 2002], the αC helix (residues 124-136) is a key signal integration motif in the kinase core. One turn of the PDK1 αC helix (residues 129-131, Figs. 3, 5) links together the N-terminal lobe, the C-terminal lobe and the active site. Arg129 points towards the activation loop and forms two hydrogen bonds with the phosphorylated Ser241, whereas Arg131 forms two hydrogen bonds with the sulphate in the phosphate pocket (Fig. 5). Glu130 coordinates Lys111 which forms a hydrogen bond with the α-phosphate of the bound ATP. This interaction is conserved in all protein kinases and shown to be crucial for activation [Johnson et al., 2001, Husen and Kuriyan, 2002]. An additional residue, His126, forms a third hydrogen bond with the phosphorylated Ser241. Val124 and Val127 on the αC helix are involved in formation of the PIF-pocket (Fig. 5).

The αC helix provides a structural link between the putative phosphopeptide binding pocket and the phosphoserine in the activation loop. The fact that R131A has higher basal activity than wild type PDK1 may indicate that this residue plays tuning role in the PDK1 structure, not only participating in the activation of PDK1 in the presence of a phosphate ion, but also on keeping the equilibrium of the enzyme towards an inactive conformation in the absence of S6K-pHM. To our knowledge this is the first report of a kinase structure in which the αC helix is positioned by 2 regulatory phosphate binding sites on either side of the helix (Fig 5). This provides a possible sensor-mechanism for linking the phosphorylation-state of the activation loop and the phosphopeptide binding event in the PIF-pocket to PDK1 activity.

Activation state

All structures of PKA solved to date show a phosphorylated T-loop and are therefore assumed to be in an active state. In addition to the unphosphorylated versus phosphorylated states of PKA, there appear to be two main conformational states possible for the latter [Zheng et al., 1993, Johnson et al., 2001]. In the active, closed conformation, all residues are positioned to facilitate phosphoryl transfer. In contrast, the inactive, open conformation is seen in absence of a nucleotide, and differs from the closed conformation by conformational changes of the N-terminal and C-terminal domains with respect to each other. In addition, three 'intermediate' structures were described from PKA, having either adenosine (PDB entry 1BKX [Narayana et al., 1997]) or the inhibitors staurosporine (PDB entry 1STC [Prade et al., 1997]) and balanol (PDB entry 1BX6 [Narayana et al., 1999]) in the ATP-binding site. Taylor and colleagues have described a method to distinguish between the active and inactive conformations, based on three distances: His87-pThr197 (αC helix positioning), Ser53-Gly186 (opening of the glycine-rich loop) and Glu170-Tyr330 (C-terminal tail distance to active site) [Johnson et al., 2001]. In PDK1, only one of these distances, the opening state of the glycine rich loop, can be measured due to sequence conservation (Fig. 3). This distance is 12.4 Å , similar to a PKA intermediate conformation (this distance in PKA is 14.2Å for the open, 11.8 Å for intermediate and 10.0 Å for the closed conformation [Johnson et al., 2001]). To allow a more direct comparison of the PDK1 structure with the available PKA structures, we have analysed the conformational state of PDK1 in detail using a novel approach, which involves a principal component analysis (also called "essential dynamics" [Amadei et al.,1993]) of the crystallographic coordinates. In short, this involves the construction of a covariance matrix containing the correlations between atomic shifts (with respect to an average structure) in the ensemble of all available PKA crystal structures. Diagonalisation of this matrix gives eigenvector/eigenvalue sets which describe concerted shifts of atoms

(eigenvectors) together with the corresponding mean square fluctuation of the structures (eigenvalues). This approach allows a condensed description of PKA conformational states using only a few degrees of freedom, as shown previously for a range of other proteins [van Aalten et al., 1997, van Aalten et al., 2000, deGroot et al., 1998]. Diagonalisation of a covariance matrix built from the backbone atoms of residues 37-196, 198-283 and 286-305 results in a set of eigenvectors that describe concerted motions of the PKA backbone. In Fig. 6A, all PKA structures are projected on a subspace spanned by the first two eigenvectors (i.e. those with the two largest eigenvalues). It appears that the PKA structures cluster in three main areas along the first eigenvector. On the left of the average structure (which by definition has a projection of 0.0 on all eigenvectors) are the structures that are known to be in the "open" conformation (Fig. 6A). Around the average structure lie the structures that have been shown to be in an "intermediate" conformation (complexes with the inhibitors staurosporine, balanol and adenosine). More to the right of the average structure are the PKA structures that are known to be in the "closed" conformation. Thus, we have captured the conformational state of PKA in a single variable, the translation along the first eigenvector. This is further clarified by investigation of the atomic shifts described by this eigenvector in Cartesian space (Fig. 6B). A hinge-bending motion is observed between the N-terminal and C-terminal lobes, opening and closing the active site. It is now possible directly to compare the PDK1 conformational state by projecting the structure (backbone atoms only) onto the PKA eigenvectors. Fig. 6A shows that the conformation of PDK1 is close to the PKA structures that are in an "intermediate" conformation, consistent with the other structural analyses described above.

Conclusions

We have reported the structure of the PDK1 catalytic domain, which, although similar to PKA, has revealed important features that increase our understanding of the mechanism by which PDK1 is regulated. The

5   structure, together with mutational analyses, defines a phosphopeptide binding pocket, consisting of a separate hydrophobic PIF-pocket and a phosphate binding site, which mediates the interaction of PDK1 with the phosphorylated hydrophobic motif of S6K. This is consistent with the previous hypothesis that phosphorylation of S6K and SGK [Biondi et al.,

10 2001] as well as RSK [Frodin et al., 2000] at their FXXFS/T hydrophobic motif (SEQ ID NO:2) is the trigger for their interaction and phosphorylation by PDK1. In this mechanism the PIF-pocket would physiologically only interact with the Phe residues when the Ser/Thr residue is phosphorylated. Furthermore, as the phosphate pocket is conserved in other AGC kinases,

15 the structural features and network of interaction of the phosphate pocket with the αC-helix on PDK1, could provide insight into the mode of activation of other AGC kinases.

Experimental Procedures

20 *Materials*

Mammalian and Insect cells culture reagents were from Life Technologies. SensorChips SA were from BiaCore AB. Glutathione Sepharose, as well as pre- packed HiTrap Q HP and Hiload Superdex 200 prep grade columns were from Amersham Biosciences. Dialysis cassettes were from the Slide-

25 A-Lyzer series (Pierce). Ni-NTA Agarose was from Qiagen. Disposable ultrafiltration devices (polyethersulfone membranes) were from Vivascience. Crystallisation research tools (primary screens, additive

screens and crystallisation plates) were from Hampton Research. Peptides were synthesised by Dr G. Blomberg (University of Bristol, UK).

General methods

Molecular biology techniques were performed using standard protocols. Site directed mutagenesis was performed using a QuickChange kit (Stratagene) following instructions provided by the manufacturer. DNA constructs used for transfection were purified from bacteria using Qiagen plasmid Mega kit according to the manufacturer's protocol, and their sequence verified. Human kidney embryonic 293 cells were cultured on 10 cm diameter dishes in Dulbecco's modified Eagle's medium containing 10% foetal bovine serum.

Buffers

Low Salt Buffer: 25mM Tris-HCl pH 7.5, 150 mM NaCl; High Salt Buffer: 25mM Tris-HCl pH 7.5, 500 mM NaCl. Lysis Buffer: 25mM Tris-HCl pH 7.5, 150 mM NaCl 0.07% β -mercaptoethanol, 1mM Benzamidine, and 20 μg/ml PMSF. Buffer A: 50 mM Tris-HCl pH 7.5, 1 mM EGTA, 1 mM EDTA, 1% (by mass) Triton-X 100, 1 mM sodium orthovanadate, 50 mM sodium fluoride, 5 mM sodium pyrophosphate, 0.27 M sucrose, 1 μM microcystin-LR, 0.1% (by vol) β -mercaptoethanol and "complete" proteinase inhibitor cocktail (one tablet per 50 ml, Roche). Buffer B: 50 mM Tris/HCl pH 7.5, 0.1 mM EGTA, 10 mM β -mercaptoethanol and 0.27 M sucrose.

Expression, purification and characterisation of the kinase domain of PDK1

A cDNA encoding for human PDK1 amino acid residues 51-359 with a stop codon inserted at position 360, was amplified by PCR reaction using full length human PDK1 cDNA in the pCMV5 vector [Alessi et al., 1997] as a template a 5'primer, which incorporates a *Bam*H1 restriction site, an initiating methionine, a hexahistidine tag.followed by a PreScission protease recognition sequence prior to the residue equivalent to Met51 of PDK1 (ggatcctataaatatggcacatcatcatcatcatctggaagttctgttccaggggcccatggacggcact gcagccgagcctcgg) (SEQ ID NO:106) and the 3' primer applied in this reaction was: 5'-ggatcctcaggtgagcttcggaggcgtctgctggtg-3' (SEQ ID NO: 107). The resulting PCR product was ligated into pCR 2.1 TOPO vector (Invitrogen) and then subcloned as a *Bam*H1-*Bam*H1 fragment into pFastbac1 vector (Life Technologies) for baculovirus protein expression. The resulting construct was then used to generate recombinant baculovirus using the Bac-to-Bac system (Life Technologies) following the manufacturer's protocol. The resulting baculoviruses were used to infect Sf21 cells at 1.5 x 106/ml. The infected cells were harvested by centrifugation 72 hours post infection. Cell pellets corresponding to 7 l of culture were resuspended in 900 ml of Lysis Buffer and cells lysed in nitrogen cavitation chamber. Cell debris was then pelleted by centrifugation, the supernatant made 0.5 M NaCl by addition of 4M NaCl and then incubated with Ni-NTA-Agarose (10 ml resin) for one hour. The resin was then washed in 10 times with 40 ml of Lysis Buffer containing 0.5M NaCl and then placed in a disposable Econo-Pac column (BioRad), where the resin was further washed with 700 ml of high salt buffer and then with 100 ml of low salt buffer, both supplemented with 10 mM imidazole. Elution was performed with 200 mM imidazole in high salt buffer and 2 ml fractions were collected. Fractions containing protein were pooled, diluted to 200 mM NaCl with 25 mM Tris/HCl pH 7.5, and loaded onto a 5 ml Hi-trap Q sepharose column. The flow-through from this step, containing PDK1, was concentrated to 4 ml and then chromatographed on a 16/60

Superdex 200 gel filtration column using an AKTA Explorer system (Amersham Biosciences) equilibrated with high salt buffer with the addition of 1mM DTT. PDK1 eluted in a large symmetric peak at the expected size for a monomer. The PDK1 containing peak was again pooled, concentrated

5 and incubated with 300 μg GST-PreScission protease (expression construct kindly provided by John Heath, University of Birmingham, UK) on ice for 4h. In order to eliminate the cleaved His-tag sequences as well as any remaining uncleaved His-PDK1 and the GST-PreScission protease, the mixture was incubated with a mixture of 200 μl glutathione-Sepharose and

10 200 μl Ni-NTA agarose resin for 15 minutes and the PDK1 protein that did not bind was collected. The resulting protein consists of PDK1 (51-359) preceded by a Gly-Pro at the N-terminus. The protein at this stage of the purification was apparently homogeneous as revealed by a single band after electrophoresis of 20 μg of protein on SDS-PAGE and staining with

15 Coomasie Brilliant Blue R250 (data not shown).

Electrospray mass spectrometry revealed a main peak mass close to the expected size of this fragment of PDK1. The specific activity of PDK1 (51-359) towards the peptide T308tide and its activation in the presence of

20 PIFtide was identical to wild type full length PDK1 [Biondi et al., 2000], and tryptic peptide mass finger printing indicated that PDK1 was quantitatively phosphorylated at Ser241 (data not shown). In BiaCore experiments, the steady state binding of PDK1 (51-359) to the peptide PIFtide was similar to that of the His-tag PDK1 (51-556) protein

25 characterised previously [Balendran et al., 1999a].

Crystallisation and data collection

The PDK1 (51-359) protein was concentrated to a final concentration of 8.5 mg/ml (as determined by a Bradford assay using bovine serum albumin as a standard). The sitting drop vapour diffusion method was used for producing crystals. Sitting drops were formed by mixing 1 µl of protein solution with 1 µl of a mother liquor solution (0.1 M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP) with the addition of 0.2 µl EDTA (100mM). Hexagonal crystals (Table I) of PDK1 were grown at 20° C from a mother liquor containing 0.1M Tris/HCl pH 8.5, 2.0 M ammonium sulphate, 16.6 mM ATP). Crystals appeared after one day, growing to 0.05 x 0.05 x 0.2 mm over 20 days. Crystals were frozen in a nitrogen gas stream after being soaked in 0.075 M Tris 8.5, 1.5M ammonium sulphate, 25% (v/v) glycerol.

Expression and purification of wild type and mutant forms of GST-PDK1.

Wild type-PDK1 [Alessi et al., 1997], PDK1[R76A], PDK1[R131A], PDK1[R76A,R131A], PDK1[T148A] and PDK1[Q150A] in the pEBG2T vector were used to express the wild type and indicated mutants of PDK1 fused through their N-terminus to glutathione S-transferase (GST). The GST fusion proteins were expressed in human embryonic kidney 293 cells. For the expression of each construct, twenty 10 cm diameter dishes of 293 cells were cultured and each dish transfected with 10 µg of the pEBG-2T construct, using a modified calcium phosphate method. 36 h post-transfection, the cells were lysed in 0.6 ml of ice-cold Buffer A, the lysates pooled, centrifuged at 4 ° C for 10 min at 13000 g and the GST-fusion proteins were purified by affinity chromatography on glutathione-Sepharose and eluted in Buffer B supplemented with 20 mM glutathione as described previously [Alessi et al., 1997]. Typically between 1 and 2mg of each GST-fusion protein was obtained and each protein was more than 75 judged by SDS polyacrylamide gel electrophoresis (data not shown).

PDK1 catalytic activity measurements

The ability of wild type and mutant PDK1 to phosphorylate the synthetic
peptide T308tide (KTFCGTPEYLAPEVRR ([Biondi et al., 2000]) (SEQ ID
NO:108) was carried out in 30 µl assays containing 100 ng of wild type or
mutant PDK1, 50 mM Tris/HCl pH 7.5, 0.1% β -mercaptoethanol, 10 mM
$MgCl_2$, 100 µM [32γ P]ATP (200 cpm/pmol) , 0.5 µM microcystin-LR, 1
mM T308tide in the presence or absence of the indicated concentrations of
the S6K-pHM peptide (SESANQVFLGFT(P)YVAPSV) (SEQ ID NO:104)
or S6K-HM peptide (SESANQVFLGFTYVAPSV) (SEQ ID NO:105).
After incubation for 10 min at 30 ° C, 25 µl of the resultant mixture was
spotted into P81 phosphocellulose paper (2 x 2 cm) and the papers washed
and analysed as described previously for assays of MAP kinase. Control
assays were carried out in parallel in which either PDK1, or peptide
substrate were omitted; these values were always less than 5% of the
activity measured in the presence of these reagents. One Unit of PDK1
activity was defined as that amount required to catalyse the phosphorylation
of 1 nmol of the T308tide in 1 min.

Biacore analysis

Binding was analysed in a BiaCore 3000 system (BiaCore AB, Stevenage,
UK). Biotinylated S6K-pHM (Biotin-C_{12}- SESANQVFLGFT(P)YVAPSV)
(SEQ ID NO:104) or the non-phosphorylated form of this peptide S6K-HM
was bound to an streptavidin- coated Sensor chip (SA) (12 response units,
RU). 30 µl of wild type or the indicated mutant GST-PDK1 were injected at
a flow rate of 30µl/min, in buffer HBS-P (10 mM HEPES pH 7.4, 0.15M

NaCl, 0.005% (by vol) polysorbate-20) supplemented with 1 mM DTT. Specific interactions between S6K-pHM and PDK1 proteins were obtained between the concentration range of 2-2150 nM PDK1. Steady state binding was determined at each concentration. Dissociation of PDK1 from the

5 phospho-peptide was monitored over a 1min period. Regeneration of the sensor chip surface was performed with 10μl injections of 0.05% SDS. As previously found for PDK1 binding to PIFtide [Biondi et al., 2000], the interaction data obtained using BiaCore did not fit to simple 1:1 interaction model. Apparent Kd values were estimated from the concentration of PDK1

10 which gives 50% of maximal response, which was obtained empirically using GST- PDK1[T148A] (RUmax=435). For all PDK1 construct tested, the off rates for S6Kp-HM were high in comparison to those of PIFtide binding with the time taken for 50% dissociation to occur for S6K-pHM is 30s compared to 1000s for PIFtide. This could account for the overall

15 approximately 100-fold lower affinity of wild type PDK1 for S6K-pHM in comparison to PIFtide.

Data collection, structure solution, and refinement

20 Data on PDK1 crystals were collected at the European Synchrotron Radiation Facility (Grenoble, France) beamline ID14-EH1 , using an ADSC Q4 CCD detector. The temperature of the crystals was maintained at 100K using a nitrogen cryostream. Data were processed using the HKL package [Otwinowski and Minor, 1997], statistics are shown in Table I.

25

The structure of PDK1 was solved by molecular replacement with AMoRe [Navaza, 1994] using the structure of PKA in complex with an inhibitory peptide as a search model (PDB entry 1YDB), against 8-4 Ådata. A single, well separated solution was found with an R-factor of 0.479 (correlation

coefficient = 0.428). The structure was automatically built using warpNtrace [Perrakis et al., 1999], which found 262 of a possible 309 residues, giving an initial protein model with R=0.293 (Rfree=0.318) after simulated annealing in CNS [Brunger et al., 1998]. Iterative protein building in O [Jones et al., 1991] together with refinement in CNS, which included incorporation of a model for ATP, the phosphoserine in the activation loop, solvent molecules and a key sulphate molecule, resulted in a final model with R=0.195 (Rfree=0.222). No electron density was observed for residues 51-70 (the N-terminus of the construct) and 233-236 (the tip of the activation loop). All figures were made with PyMOL.

Table I

Details of data collection & structure refinement for the PDK1 kinase domain. Values between brackets are for the highest resolution shell. All measured data were included in structure refinement.

Wave length ( )	0.933
Space group	$P3_221$
Unit cell ( )	a=123.01, b=123.01, c=47.62
Resolution ( )	25-2.0 (2.07-1.0)
Observed reflections	77315
Unique reflections	27643
Redundancy	2.8 (2.5)
Completeness(%)	98.0 (93.5)
Rmerge	0.091 (0.454)
I/ sigma I	7.3 (2.0)
R_{free} reflections	579
R_{cryst}	0.195
R_{free}	0.222

Number of groups	
°°Protein residues	71-359
°°Water	200
ATP	1
SO$_4$	5
Glycerol	8
Wilson B (^{2})	22.4
< B > Protein	25.6
< B > Water	35.7
< B > ATP	38.8
RMSD from ideal geometry	
Bond lengths ( )	0.005
Bond angles ($^{\circ}$)	1.34
Main chain B (^{2})	1.5.

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Example 2: Co-ordinates for PDK1fragment with all alternate side chains.

```
REMARK coordinates from restrained individual B-factor refinement
REMARK refinement resolution: 25.0 - 2.0 A
REMARK starting r= 0.1972 free_r= 0.2220
REMARK final    r= 0.1954 free_r= 0.2224
REMARK B rmsd for bonded mainchain atoms=  1.501  target= 1.5
REMARK B rmsd for bonded sidechain atoms=  2.235  target= 2.0
REMARK B rmsd for angle mainchain atoms=  2.347  target= 2.0
REMARK B rmsd for angle sidechain atoms=  3.302  target= 2.5
REMARK rweight=  0.0900 (with wa= 1.29263)
REMARK target= mlf  steps= 30
REMARK sg= P3(2)21 a= 123.013 b= 123.013 c= 47.624 alpha= 90 beta= 90
gamma= 120
REMARK parameter file 1  : /dd1/david/projects/PDK1_new/CNS/prot.par
REMARK parameter file 2  : /dd1/david/projects/PDK1_new/CNS/atp.par
REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
REMARK parameter file 4  : CNS_TOPPAR:ion.param
REMARK parameter file 5  : /dd1/david/projects/PDK1_new/CNS/glycerol.par
REMARK molecular structure file: ../generate/alternate.mtf
REMARK input coordinates: ../minimize/minimize.pdb
REMARK reflection file= ../../1/hkl/cns.hkl
REMARK ncs= none
REMARK B-correction resolution: 6.0 - 2.0
REMARK initial B-factor correction applied to fobs :
REMARK   B11= -2.766 B22= -2.766 B33=   5.532
REMARK   B12= -0.375 B13=   0.000 B23=   0.000
REMARK B-factor correction applied to coordinate array B:    0.031
REMARK bulk solvent: density level= 0.378441 e/A^3, B-factor= 52.6885 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:    28210 ( 100.0
% )
REMARK number of unobserved reflections (no entry or |F|=0):   568 (   2.0
% )
REMARK number of reflections rejected:                          0 (   0.0
% )
REMARK total number of reflections used:                    27642 (  98.0
% )
REMARK number of reflections in working set:                27063 (  95.9
% )
REMARK number of reflections in test set:                     579 (   2.1
% )
CRYST1  123.013  123.013   47.624   90.00   90.00 120.00 P 32 2 1
REMARK FILENAME="bindividual.pdb"
REMARK DATE:16-Apr-2002  18:31:12       created by user: david
REMARK VERSION:1.0
ATOM      1  CB  PRO A  71      58.912  -7.251   8.216  1.00 67.78      A
ATOM      2  CG  PRO A  71      59.621  -6.941   9.534  1.00 69.16      A
ATOM      3  C   PRO A  71      59.493  -6.506   5.894  1.00 67.06      A
ATOM      4  O   PRO A  71      59.196  -5.318   5.766  1.00 66.66      A
ATOM      5  N   PRO A  71      60.984  -6.073   7.833  1.00 67.86      A
ATOM      6  CD  PRO A  71      60.554  -5.762   9.207  1.00 68.24      A
ATOM      7  CA  PRO A  71      60.040  -7.035   7.217  1.00 67.75      A
ATOM      8  N   PRO A  72      59.356  -7.385   4.890  1.00 66.32      A
ATOM      9  CD  PRO A  72      59.712  -8.816   4.898  1.00 67.17      A
ATOM     10  CA  PRO A  72      58.840  -6.986   3.578  1.00 65.61      A
ATOM     11  CB  PRO A  72      58.672  -8.321   2.858  1.00 66.47      A
ATOM     12  CG  PRO A  72      59.796  -9.133   3.419  1.00 67.57      A
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      ATOM    13   C    PRO A  72   57.527   -6.208    3.673   1.00 63.94   A
      ATOM    14   O    PRO A  72   56.710   -6.451    4.561   1.00 64.11   A
      ATOM    15   N    ALA A  73   57.341   -5.268    2.753   1.00 61.57   A
      ATOM    16   CA   ALA A  73   56.133   -4.454    2.708   1.00 58.74   A
 5    ATOM    17   CB   ALA A  73   56.438   -3.030    3.165   1.00 58.05   A
      ATOM    18   C    ALA A  73   55.626   -4.448    1.271   1.00 56.78   A
      ATOM    19   O    ALA A  73   56.347   -4.834    0.349   1.00 56.95   A
      ATOM    20   N    PRO A  74   54.372   -4.024    1.057   1.00 54.15   A
      ATOM    21   CD   PRO A  74   53.335   -3.610    2.018   1.00 53.31   A
10    ATOM    22   CA   PRO A  74   53.856   -4.003   -0.314   1.00 52.54   A
      ATOM    23   CB   PRO A  74   52.474   -3.375   -0.148   1.00 52.86   A
      ATOM    24   CG   PRO A  74   52.067   -3.824    1.226   1.00 52.88   A
      ATOM    25   C    PRO A  74   54.772   -3.167   -1.204   1.00 50.08   A
      ATOM    26   O    PRO A  74   55.559   -2.361   -0.708   1.00 49.96   A
15    ATOM    27   N    ALA A  75   54.680   -3.366   -2.514   1.00 47.58   A
      ATOM    28   CA   ALA A  75   55.503   -2.602   -3.446   1.00 44.69   A
      ATOM    29   CB   ALA A  75   55.312   -3.121   -4.870   1.00 46.14   A
      ATOM    30   C    ALA A  75   55.100   -1.134   -3.371   1.00 41.55   A
      ATOM    31   O    ALA A  75   53.947   -0.813   -3.086   1.00 41.01   A
20    ATOM    32   N    LYS A  76   56.053   -0.245   -3.619   1.00 38.31   A
      ATOM    33   CA   LYS A  76   55.781    1.184   -3.588   1.00 35.72   A
      ATOM    34   CB   LYS A  76   57.053    1.957   -3.930   1.00 37.70   A
      ATOM    35   CG   LYS A  76   57.123    3.356   -3.350   1.00 40.99   A
      ATOM    36   CD   LYS A  76   57.262    3.316   -1.836   1.00 40.04   A
25    ATOM    37   CE   LYS A  76   57.511    4.705   -1.277   1.00 42.08   A
      ATOM    38   NZ   LYS A  76   57.681    4.695    0.202   1.00 42.99   A
      ATOM    39   C    LYS A  76   54.708    1.467   -4.638   1.00 32.65   A
      ATOM    40   O    LYS A  76   54.814    1.005   -5.770   1.00 31.41   A
      ATOM    41   N    LYS A  77   53.668    2.207   -4.270   1.00 28.59   A
30    ATOM    42   CA   LYS A  77   52.619    2.517   -5.232   1.00 25.72   A
      ATOM    43   CB   LYS A  77   51.316    2.865   -4.509   1.00 26.22   A
      ATOM    44   CG   LYS A  77   50.796    1.731   -3.631   1.00 27.15   A
      ATOM    45   CD   LYS A  77   49.487    2.089   -2.967   1.00 26.80   A
      ATOM    46   CE   LYS A  77   49.136    1.091   -1.870   1.00 27.31   A
35    ATOM    47   NZ   LYS A  77   48.998   -0.296   -2.380   1.00 27.17   A
      ATOM    48   C    LYS A  77   53.053    3.668   -6.137   1.00 24.67   A
      ATOM    49   O    LYS A  77   54.010    4.377   -5.829   1.00 21.60   A
      ATOM    50   N    ARG A  78   52.351    3.838   -7.254   1.00 23.66   A
      ATOM    51   CA   ARG A  78   52.662    4.897   -8.211   1.00 26.14   A
40    ATOM    52   CB   ARG A  78   53.574    4.344   -9.318   1.00 28.57   A
      ATOM    53   CG   ARG A  78   53.017    3.139  -10.050   1.00 34.78   A
      ATOM    54   CD   ARG A  78   54.092    2.465  -10.896   1.00 40.96   A
      ATOM    55   NE   ARG A  78   53.560    1.364  -11.700   1.00 48.93   A
      ATOM    56   CZ   ARG A  78   52.985    0.270  -11.203   1.00 52.58   A
45    ATOM    57   NH1  ARG A  78   52.860    0.113   -9.889   1.00 54.60   A
      ATOM    58   NH2  ARG A  78   52.530   -0.672  -12.022   1.00 54.09   A
      ATOM    59   C    ARG A  78   51.382    5.488   -8.803   1.00 23.76   A
      ATOM    60   O    ARG A  78   50.311    4.888   -8.706   1.00 24.25   A
      ATOM    61   N    PRO A  79   51.475    6.676   -9.428   1.00 21.76   A
50    ATOM    62   CD   PRO A  79   52.691    7.475   -9.668   1.00 20.82   A
      ATOM    63   CA   PRO A  79   50.301    7.325  -10.021   1.00 21.96   A
      ATOM    64   CB   PRO A  79   50.910    8.481  -10.816   1.00 22.27   A
      ATOM    65   CG   PRO A  79   52.124    8.831  -10.014   1.00 22.12   A
      ATOM    66   C    PRO A  79   49.446    6.413  -10.903   1.00 22.86   A
55    ATOM    67   O    PRO A  79   48.213    6.461  -10.842   1.00 20.52   A
      ATOM    68   N    GLU A  80   50.103    5.586  -11.714   1.00 21.87   A
      ATOM    69   CA   GLU A  80   49.403    4.685  -12.628   1.00 22.99   A
      ATOM    70   CB   GLU   80  50.393    3.994  -13.571   0.50 25.24  AC1
      ATOM    71   CG   GLU   80  51.230    2.907  -12.925   0.50 28.75  AC1
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     ATOM    72  CD   GLU   80 52.157   2.224 -13.913  0.50 31.99  AC1
     ATOM    73  OE1  GLU   80 53.072   2.897 -14.433  0.50 34.34  AC1
     ATOM    74  OE2  GLU   80 51.969   1.015 -14.172  0.50 32.83  AC1
     ATOM    75  C    GLU A 80 48.556   3.631 -11.912  1.00 22.09   A
 5   ATOM    76  O    GLU A 80 47.692   3.013 -12.530  1.00 22.37   A
     ATOM    77  N    ASP A 81 48.804   3.413 -10.622  1.00 19.97   A
     ATOM    78  CA   ASP A 81 48.026   2.423  -9.874  1.00 19.93   A
     ATOM    79  CB   ASP A 81 48.736   2.029  -8.571  1.00 21.19   A
     ATOM    80  CG   ASP A 81 50.089   1.380  -8.807  1.00 22.46   A
10   ATOM    81  OD1  ASP A 81 50.195   0.554  -9.731  1.00 24.22   A
     ATOM    82  OD2  ASP A 81 51.043   1.685  -8.058  1.00 23.33   A
     ATOM    83  C    ASP A 81 46.652   2.975  -9.518  1.00 20.85   A
     ATOM    84  O    ASP A 81 45.793   2.246  -9.015  1.00 19.96   A
     ATOM    85  N    PHE A 82 46.445   4.258  -9.804  1.00 18.91   A
15   ATOM    86  CA   PHE A 82 45.200   4.934  -9.465  1.00 19.30   A
     ATOM    87  CB   PHE A 82 45.475   6.027  -8.427  1.00 18.43   A
     ATOM    88  CG   PHE A 82 46.134   5.531  -7.175  1.00 18.01   A
     ATOM    89  CD1  PHE A 82 45.371   5.136  -6.084  1.00 17.19   A
     ATOM    90  CD2  PHE A 82 47.520   5.460  -7.086  1.00 18.99   A
20   ATOM    91  CE1  PHE A 82 45.977   4.676  -4.918  1.00 17.12   A
     ATOM    92  CE2  PHE A 82 48.137   5.000  -5.925  1.00 19.64   A
     ATOM    93  CZ   PHE A 82 47.361   4.607  -4.838  1.00 18.00   A
     ATOM    94  C    PHE A 82 44.476   5.596 -10.621  1.00 20.81   A
     ATOM    95  O    PHE A 82 45.066   5.933 -11.649  1.00 20.34   A
25   ATOM    96  N    LYS A 83 43.182   5.792 -10.411  1.00 19.80   A
     ATOM    97  CA   LYS A 83 42.321   6.478 -11.353  1.00 21.65   A
     ATOM    98  CB   LYS A 83 41.096   5.625 -11.687  1.00 22.02   A
     ATOM    99  CG   LYS A 83 40.062   6.326 -12.550  1.00 28.93   A
     ATOM   100  CD   LYS A 83 38.974   5.355 -12.981  1.00 34.20   A
30   ATOM   101  CE   LYS A 83 37.909   6.042 -13.824  1.00 38.10   A
     ATOM   102  NZ   LYS A 83 37.179   7.086 -13.043  1.00 43.33   A
     ATOM   103  C    LYS A 83 41.913   7.702 -10.541  1.00 20.74   A
     ATOM   104  O    LYS A 83 41.084   7.606  -9.635  1.00 20.98   A
     ATOM   105  N    PHE A 84 42.513   8.848 -10.835  1.00 19.99   A
35   ATOM   106  CA   PHE A 84 42.188  10.049 -10.083  1.00 18.63   A
     ATOM   107  CB   PHE A 84 43.279  11.103 -10.258  1.00 18.95   A
     ATOM   108  CG   PHE A 84 44.571  10.741  -9.587  1.00 17.68   A
     ATOM   109  CD1  PHE A 84 45.498   9.926 -10.224  1.00 18.16   A
     ATOM   110  CD2  PHE A 84 44.843  11.183  -8.299  1.00 19.66   A
40   ATOM   111  CE1  PHE A 84 46.676   9.556  -9.589  1.00 18.09   A
     ATOM   112  CE2  PHE A 84 46.021  10.816  -7.653  1.00 18.89   A
     ATOM   113  CZ   PHE A 84 46.936  10.002  -8.301  1.00 17.33   A
     ATOM   114  C    PHE A 84 40.834  10.617 -10.460  1.00 19.69   A
     ATOM   115  O    PHE A 84 40.391  10.489 -11.601  1.00 20.72   A
45   ATOM   116  N    GLY A 85 40.178  11.233  -9.484  1.00 16.80   A
     ATOM   117  CA   GLY A 85 38.872  11.810  -9.716  1.00 17.73   A
     ATOM   118  C    GLY A 85 38.819  13.280  -9.346  1.00 18.75   A
     ATOM   119  O    GLY A 85 39.740  14.043  -9.650  1.00 18.45   A
     ATOM   120  N    LYS A 86 37.753  13.673  -8.659  1.00 16.80   A
50   ATOM   121  CA   LYS A 86 37.571  15.064  -8.278  1.00 18.26   A
     ATOM   122  CB   LYS A 86 36.133  15.302  -7.812  1.00 19.00   A
     ATOM   123  CG   LYS A 86 35.793  14.660  -6.481  1.00 21.55   A
     ATOM   124  CD   LYS A 86 34.368  14.981  -6.066  1.00 26.48   A
     ATOM   125  CE   LYS A 86 33.994  14.239  -4.793  1.00 31.92   A
55   ATOM   126  NZ   LYS A 86 32.568  14.457  -4.412  1.00 35.36   A
     ATOM   127  C    LYS A 86 38.523  15.571  -7.202  1.00 18.57   A
     ATOM   128  O    LYS A 86 39.045  14.807  -6.385  1.00 16.77   A
     ATOM   129  N    ILE A 87 38.737  16.881  -7.227  1.00 17.88   A
     ATOM   130  CA   ILE A 87 39.577  17.554  -6.256  1.00 18.26   A
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	ATOM	131	CB	ILE A	87	39.994	18.952	-6.772	1.00 19.60		A
	ATOM	132	CG2	ILE A	87	40.593	19.786	-5.628	1.00 18.73		A
	ATOM	133	CG1	ILE A	87	40.968	18.786	-7.945	1.00 21.16		A
	ATOM	134	CD1	ILE A	87	41.412	20.087	-8.588	1.00 25.26		A
5	ATOM	135	C	ILE A	87	38.731	17.709	-4.997	1.00 19.67		A
	ATOM	136	O	ILE A	87	37.628	18.249	-5.052	1.00 20.41		A
	ATOM	137	N	LEU A	88	39.240	17.229	-3.867	1.00 19.15		A
	ATOM	138	CA	LEU A	88	38.508	17.324	-2.611	1.00 20.68		A
	ATOM	139	CB	LEU A	88	38.870	16.151	-1.700	1.00 19.97		A
10	ATOM	140	CG	LEU A	88	38.529	14.759	-2.237	1.00 19.24		A
	ATOM	141	CD1	LEU A	88	39.090	13.692	-1.311	1.00 21.41		A
	ATOM	142	CD2	LEU A	88	37.029	14.622	-2.359	1.00 18.84		A
	ATOM	143	C	LEU A	88	38.815	18.632	-1.901	1.00 23.11		A
	ATOM	144	O	LEU A	88	37.999	19.146	-1.139	1.00 25.10		A
15	ATOM	145	N	GLY A	89	39.997	19.174	-2.149	1.00 24.09		A
	ATOM	146	CA	GLY A	89	40.367	20.418	-1.507	1.00 24.27		A
	ATOM	147	C	GLY A	89	41.658	20.954	-2.078	1.00 25.47		A
	ATOM	148	O	GLY A	89	42.445	20.202	-2.666	1.00 22.19		A
	ATOM	149	N	GLU A	90	41.870	22.254	-1.906	1.00 26.22		A
20	ATOM	150	CA	GLU A	90	43.064	22.924	-2.404	1.00 29.96		A
	ATOM	151	CB	GLU A	90	42.698	23.814	-3.596	1.00 30.75		A
	ATOM	152	CG	GLU A	90	42.267	23.038	-4.831	1.00 34.32		A
	ATOM	153	CD	GLU A	90	41.711	23.930	-5.927	1.00 38.27		A
	ATOM	154	OE1	GLU A	90	40.590	24.456	-5.764	1.00 40.57		A
25	ATOM	155	OE2	GLU A	90	42.398	24.110	-6.952	1.00 40.90		A
	ATOM	156	C	GLU A	90	43.711	23.768	-1.313	1.00 30.68		A
	ATOM	157	O	GLU A	90	43.049	24.574	-0.668	1.00 32.83		A
	ATOM	158	N	GLY A	91	45.006	23.566	-1.104	1.00 29.66		A
	ATOM	159	CA	GLY A	91	45.724	24.332	-0.104	1.00 29.40		A
30	ATOM	160	C	GLY A	91	46.795	25.151	-0.798	1.00 29.98		A
	ATOM	161	O	GLY A	91	46.894	25.130	-2.028	1.00 28.16		A
	ATOM	162	N	SER A	92	47.605	25.870	-0.029	1.00 28.30		A
	ATOM	163	CA	SER A	92	48.653	26.681	-0.633	1.00 30.50		A
	ATOM	164	CB	SER A	92	49.165	27.717	0.370	1.00 32.43		A
35	ATOM	165	OG	SER A	92	49.520	27.099	1.593	1.00 40.94		A
	ATOM	166	C	SER A	92	49.815	25.843	-1.164	1.00 29.77		A
	ATOM	167	O	SER A	92	50.456	26.221	-2.143	1.00 30.46		A
	ATOM	168	N	PHE A	93	50.087	24.703	-0.536	1.00 27.65		A
	ATOM	169	CA	PHE A	93	51.185	23.855	-0.995	1.00 26.34		A
40	ATOM	170	CB	PHE A	93	52.281	23.785	0.068	1.00 27.95		A
	ATOM	171	CG	PHE A	93	52.861	25.117	0.406	1.00 31.06		A
	ATOM	172	CD1	PHE A	93	52.283	25.909	1.392	1.00 29.96		A
	ATOM	173	CD2	PHE A	93	53.949	25.613	-0.308	1.00 31.38		A
	ATOM	174	CE1	PHE A	93	52.779	27.181	1.665	1.00 32.69		A
45	ATOM	175	CE2	PHE A	93	54.452	26.883	-0.044	1.00 32.63		A
	ATOM	176	CZ	PHE A	93	53.864	27.670	0.945	1.00 31.81		A
	ATOM	177	C	PHE A	93	50.759	22.445	-1.365	1.00 25.39		A
	ATOM	178	O	PHE A	93	51.601	21.559	-1.522	1.00 24.59		A
	ATOM	179	N	SER A	94	49.457	22.235	-1.519	1.00 23.63		A
50	ATOM	180	CA	SER A	94	48.965	20.912	-1.860	1.00 21.43		A
	ATOM	181	CB	SER A	94	49.017	20.013	-0.628	1.00 21.42		A
	ATOM	182	OG	SER A	94	48.091	20.475	0.340	1.00 21.19		A
	ATOM	183	C	SER A	94	47.539	20.925	-2.378	1.00 19.82		A
	ATOM	184	O	SER A	94	46.795	21.882	-2.173	1.00 18.76		A
55	ATOM	185	N	THR A	95	47.114	19.832	-3.038	1.00 19.38		A
	ATOM	186	CA	THR A	95	45.840	19.637	-3.580	1.00 17.98		A
	ATOM	187	CB	THR A	95	45.818	19.818	-5.110	1.00 19.25		A
	ATOM	188	OG1	THR A	95	46.196	21.162	-5.434	1.00 22.04		A
	ATOM	189	CG2	THR A	95	44.421	19.549	-5.661	1.00 17.61		A

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     ATOM    190  C    THR A  95      45.455  18.201  -3.243  1.00 18.61      A
     ATOM    191  O    THR A  95      46.212  17.264  -3.524  1.00 17.10      A
     ATOM    192  N    VAL A  96      44.295  18.024  -2.623  1.00 16.53      A
     ATOM    193  CA   VAL A  96      43.845  16.685  -2.266  1.00 16.05      A
 5   ATOM    194  CB   VAL A  96      43.170  16.672  -0.886  1.00 16.32      A
     ATOM    195  CG1  VAL A  96      42.741  15.249  -0.532  1.00 18.02      A
     ATOM    196  CG2  VAL A  96      44.145  17.206   0.168  1.00 16.69      A
     ATOM    197  C    VAL A  96      42.875  16.207  -3.335  1.00 16.42      A
     ATOM    198  O    VAL A  96      41.906  16.892  -3.665  1.00 16.47      A
10   ATOM    199  N    VAL A  97      43.157  15.033  -3.888  1.00 16.80      A
     ATOM    200  CA   VAL A  97      42.338  14.471  -4.949  1.00 16.72      A
     ATOM    201  CB   VAL A  97      43.153  14.354  -6.255  1.00 18.43      A
     ATOM    202  CG1  VAL A  97      42.249  13.927  -7.404  1.00 19.69      A
     ATOM    203  CG2  VAL A  97      43.831  15.685  -6.569  1.00 17.84      A
15   ATOM    204  C    VAL A  97      41.812  13.091  -4.583  1.00 16.77      A
     ATOM    205  O    VAL A  97      42.532  12.270  -4.014  1.00 17.13      A
     ATOM    206  N    LEU A  98      40.545  12.845  -4.895  1.00 16.62      A
     ATOM    207  CA   LEU A  98      39.947  11.548  -4.624  1.00 17.04      A
     ATOM    208  CB   LEU A  98      38.424  11.633  -4.743  1.00 16.89      A
20   ATOM    209  CG   LEU A  98      37.635  10.342  -4.508  1.00 19.46      A
     ATOM    210  CD1  LEU A  98      37.990   9.762  -3.146  1.00 20.07      A
     ATOM    211  CD2  LEU A  98      36.114  10.627  -4.588  1.00 17.93      A
     ATOM    212  C    LEU A  98      40.512  10.597  -5.677  1.00 17.38      A
     ATOM    213  O    LEU A  98      40.527  10.920  -6.863  1.00 18.60      A
25   ATOM    214  N    ALA A  99      40.995   9.438  -5.246  1.00 17.13      A
     ATOM    215  CA   ALA A  99      41.570   8.466  -6.168  1.00 18.42      A
     ATOM    216  CB   ALA A  99      43.090   8.524  -6.105  1.00 14.76      A
     ATOM    217  C    ALA A  99      41.102   7.055  -5.848  1.00 21.40      A
     ATOM    218  O    ALA A  99      40.941   6.691  -4.679  1.00 22.52      A
30   ATOM    219  N    ARG A 100      40.878   6.261  -6.888  1.00 19.77      A
     ATOM    220  CA   ARG A 100      40.459   4.884  -6.693  1.00 20.85      A
     ATOM    221  CB   ARG A 100      39.202   4.585  -7.518  1.00 24.22      A
     ATOM    222  CG   ARG A 100      38.608   3.205  -7.256  1.00 31.78      A
     ATOM    223  CD   ARG A 100      37.326   2.979  -8.048  1.00 36.24      A
35   ATOM    224  NE   ARG A 100      36.213   3.818  -7.594  1.00 41.40      A
     ATOM    225  CZ   ARG A 100      35.566   3.662  -6.439  1.00 42.05      A
     ATOM    226  NH1  ARG A 100      35.912   2.696  -5.598  1.00 40.67      A
     ATOM    227  NH2  ARG A 100      34.559   4.468  -6.128  1.00 43.65      A
     ATOM    228  C    ARG A 100      41.613   3.985  -7.129  1.00 18.63      A
40   ATOM    229  O    ARG A 100      42.078   4.065  -8.271  1.00 19.49      A
     ATOM    230  N    GLU A 101      42.102   3.157  -6.212  1.00 16.43      A
     ATOM    231  CA   GLU A 101      43.196   2.246  -6.533  1.00 16.11      A
     ATOM    232  CB   GLU A 101      43.774   1.637  -5.248  1.00 16.79      A
     ATOM    233  CG   GLU A 101      44.917   0.657  -5.488  1.00 16.51      A
45   ATOM    234  CD   GLU A 101      45.501   0.115  -4.200  1.00 18.20      A
     ATOM    235  OE1  GLU A 101      44.733  -0.081  -3.239  1.00 18.32      A
     ATOM    236  OE2  GLU A 101      46.725  -0.132  -4.153  1.00 17.14      A
     ATOM    237  C    GLU A 101      42.625   1.152  -7.442  1.00 17.92      A
     ATOM    238  O    GLU A 101      41.681   0.462  -7.069  1.00 18.02      A
50   ATOM    239  N    LEU A 102      43.198   1.002  -8.632  1.00 19.06      A
     ATOM    240  CA   LEU A 102      42.718   0.025  -9.607  1.00 20.71      A
     ATOM    241  CB   LEU A 102      43.569   0.097 -10.878  1.00 23.42      A
     ATOM    242  CG   LEU A 102      43.531   1.426 -11.642  1.00 25.30      A
     ATOM    243  CD1  LEU A 102      44.577   1.414 -12.748  1.00 27.88      A
55   ATOM    244  CD2  LEU A 102      42.140   1.647 -12.214  1.00 26.79      A
     ATOM    245  C    LEU A 102      42.671  -1.418  -9.125  1.00 21.62      A
     ATOM    246  O    LEU A 102      41.668  -2.103  -9.305  1.00 21.09      A
     ATOM    247  N    ALA A 103      43.753  -1.874  -8.507  1.00 19.38      A
     ATOM    248  CA   ALA A 103      43.836  -3.249  -8.035  1.00 20.87      A
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	ATOM	249	CB	ALA A 103	45.284	-3.571	-7.671	1.00 19.23	A
	ATOM	250	C	ALA A 103	42.919	-3.629	-6.872	1.00 19.92	A
	ATOM	251	O	ALA A 103	42.703	-4.815	-6.628	1.00 20.38	A
	ATOM	252	N	THR A 104	42.361	-2.643	-6.175	1.00 18.12	A
5	ATOM	253	CA	THR A 104	41.517	-2.927	-5.018	1.00 17.15	A
	ATOM	254	CB	THR A 104	42.212	-2.484	-3.717	1.00 19.54	A
	ATOM	255	OG1	THR A 104	42.456	-1.070	-3.773	1.00 19.26	A
	ATOM	256	CG2	THR A 104	43.536	-3.219	-3.529	1.00 17.02	A
	ATOM	257	C	THR A 104	40.159	-2.247	-5.026	1.00 19.44	A
10	ATOM	258	O	THR A 104	39.259	-2.648	-4.285	1.00 18.70	A
	ATOM	259	N	SER A 105	40.034	-1.207	-5.847	1.00 19.65	A
	ATOM	260	CA	SER A 105	38.819	-0.400	-5.967	1.00 19.37	A
	ATOM	261	CB	SER 105	37.598	-1.304	-6.173	0.50 21.81	AC1
	ATOM	262	OG	SER 105	36.431	-0.539	-6.412	0.50 23.01	AC1
15	ATOM	263	C	SER A 105	38.644	0.447	-4.701	1.00 18.99	A
	ATOM	264	O	SER A 105	37.602	1.070	-4.488	1.00 18.66	A
	ATOM	265	N	ARG A 106	39.674	0.468	-3.861	1.00 16.84	A
	ATOM	266	CA	ARG A 106	39.655	1.267	-2.634	1.00 16.21	A
	ATOM	267	CB	ARG A 106	40.827	0.886	-1.723	1.00 16.41	A
20	ATOM	268	CG	ARG A 106	40.619	-0.367	-0.906	1.00 15.49	A
	ATOM	269	CD	ARG A 106	41.887	-0.755	-0.170	1.00 17.43	A
	ATOM	270	NE	ARG A 106	41.620	-1.792	0.824	1.00 20.47	A
	ATOM	271	CZ	ARG A 106	42.548	-2.568	1.371	1.00 20.24	A
	ATOM	272	NH1	ARG A 106	43.821	-2.433	1.017	1.00 17.80	A
25	ATOM	273	NH2	ARG A 106	42.198	-3.468	2.285	1.00 20.14	A
	ATOM	274	C	ARG A 106	39.785	2.746	-2.981	1.00 17.37	A
	ATOM	275	O	ARG A 106	40.514	3.103	-3.902	1.00 17.75	A
	ATOM	276	N	GLU A 107	39.085	3.599	-2.240	1.00 18.05	A
	ATOM	277	CA	GLU A 107	39.156	5.039	-2.461	1.00 20.80	A
30	ATOM	278	CB	GLU A 107	37.779	5.694	-2.337	1.00 22.93	A
	ATOM	279	CG	GLU A 107	36.711	5.171	-3.269	1.00 30.87	A
	ATOM	280	CD	GLU A 107	35.431	5.975	-3.148	1.00 32.40	A
	ATOM	281	OE1	GLU A 107	35.262	6.939	-3.923	1.00 33.74	A
	ATOM	282	OE2	GLU A 107	34.608	5.654	-2.263	1.00 36.00	A
35	ATOM	283	C	GLU A 107	40.053	5.678	-1.410	1.00 18.93	A
	ATOM	284	O	GLU A 107	39.891	5.427	-0.220	1.00 19.21	A
	ATOM	285	N	TYR A 108	40.988	6.507	-1.852	1.00 16.70	A
	ATOM	286	CA	TYR A 108	41.883	7.209	-0.942	1.00 15.86	A
	ATOM	287	CB	TYR A 108	43.325	6.728	-1.104	1.00 15.30	A
40	ATOM	288	CG	TYR A 108	43.593	5.328	-0.612	1.00 16.33	A
	ATOM	289	CD1	TYR A 108	43.765	5.066	0.746	1.00 16.36	A
	ATOM	290	CE1	TYR A 108	44.046	3.769	1.201	1.00 18.48	A
	ATOM	291	CD2	TYR A 108	43.701	4.268	-1.511	1.00 13.25	A
	ATOM	292	CE2	TYR A 108	43.980	2.981	-1.075	1.00 17.28	A
45	ATOM	293	CZ	TYR A 108	44.152	2.736	0.276	1.00 15.89	A
	ATOM	294	OH	TYR A 108	44.440	1.461	0.688	1.00 19.38	A
	ATOM	295	C	TYR A 108	41.850	8.687	-1.292	1.00 16.80	A
	ATOM	296	O	TYR A 108	41.560	9.058	-2.431	1.00 15.22	A
	ATOM	297	N	ALA A 109	42.132	9.528	-0.306	1.00 14.61	A
50	ATOM	298	CA	ALA A 109	42.207	10.957	-0.539	1.00 14.30	A
	ATOM	299	CB	ALA A 109	41.671	11.726	0.661	1.00 14.78	A
	ATOM	300	C	ALA A 109	43.713	11.136	-0.667	1.00 16.79	A
	ATOM	301	O	ALA A 109	44.450	10.983	0.317	1.00 16.52	A
	ATOM	302	N	ILE A 110	44.182	11.410	-1.881	1.00 14.80	A
55	ATOM	303	CA	ILE A 110	45.609	11.574	-2.093	1.00 15.80	A
	ATOM	304	CB	ILE A 110	46.065	10.863	-3.396	1.00 16.85	A
	ATOM	305	CG2	ILE A 110	47.550	11.098	-3.632	1.00 16.80	A
	ATOM	306	CG1	ILE A 110	45.774	9.358	-3.284	1.00 17.76	A
	ATOM	307	CD1	ILE A 110	46.308	8.513	-4.437	1.00 16.07	A

	ATOM	308	C	ILE A 110	46.004	13.045	−2.129	1.00	17.78		A
	ATOM	309	O	ILE A 110	45.534	13.813	−2.976	1.00	16.24		A
	ATOM	310	N	LYS A 111	46.846	13.435	−1.177	1.00	16.15		A
	ATOM	311	CA	LYS A 111	47.326	14.808	−1.100	1.00	17.20		A
5	ATOM	312	CB	LYS A 111	47.700	15.176	0.344	1.00	17.41		A
	ATOM	313	CG	LYS A 111	48.350	16.547	0.464	1.00	20.71		A
	ATOM	314	CD	LYS A 111	48.585	16.971	1.910	1.00	24.25		A
	ATOM	315	CE	LYS A 111	47.288	17.381	2.598	1.00	29.46		A
	ATOM	316	NZ	LYS A 111	47.516	17.866	4.000	1.00	30.50		A
10	ATOM	317	C	LYS A 111	48.551	14.890	−1.994	1.00	16.41		A
	ATOM	318	O	LYS A 111	49.509	14.137	−1.813	1.00	18.20		A
	ATOM	319	N	ILE A 112	48.509	15.798	−2.963	1.00	15.87		A
	ATOM	320	CA	ILE A 112	49.606	15.967	−3.907	1.00	17.28		A
	ATOM	321	CB	ILE A 112	49.079	15.911	−5.358	1.00	16.43		A
15	ATOM	322	CG2	ILE A 112	50.235	15.998	−6.341	1.00	15.12		A
	ATOM	323	CG1	ILE A 112	48.293	14.609	−5.565	1.00	16.82		A
	ATOM	324	CD1	ILE A 112	47.580	14.511	−6.904	1.00	18.47		A
	ATOM	325	C	ILE A 112	50.307	17.301	−3.663	1.00	19.03		A
	ATOM	326	O	ILE A 112	49.669	18.350	−3.635	1.00	19.15		A
20	ATOM	327	N	LEU A 113	51.622	17.245	−3.472	1.00	20.22		A
	ATOM	328	CA	LEU A 113	52.416	18.442	−3.214	1.00	22.36		A
	ATOM	329	CB	LEU A 113	52.995	18.397	−1.794	1.00	22.13		A
	ATOM	330	CG	LEU A 113	52.042	18.063	−0.646	1.00	22.46		A
	ATOM	331	CD1	LEU A 113	51.866	16.557	−0.553	1.00	23.81		A
25	ATOM	332	CD2	LEU A 113	52.603	18.595	0.660	1.00	23.68		A
	ATOM	333	C	LEU A 113	53.560	18.547	−4.215	1.00	23.37		A
	ATOM	334	O	LEU A 113	54.300	17.586	−4.424	1.00	23.11		A
	ATOM	335	N	GLU A 114	53.706	19.714	−4.834	1.00	23.88		A
	ATOM	336	CA	GLU A 114	54.771	19.920	−5.806	1.00	26.00		A
30	ATOM	337	CB	GLU A 114	54.435	21.111	−6.706	1.00	27.74		A
	ATOM	338	CG	GLU A 114	55.533	21.452	−7.696	1.00	35.07		A
	ATOM	339	CD	GLU A 114	55.220	22.696	−8.497	1.00	39.24		A
	ATOM	340	OE1	GLU A 114	54.808	23.703	−7.885	1.00	41.45		A
	ATOM	341	OE2	GLU A 114	55.395	22.670	−9.736	1.00	44.05		A
35	ATOM	342	C	GLU A 114	56.087	20.163	−5.067	1.00	24.37		A
	ATOM	343	O	GLU A 114	56.186	21.071	−4.238	1.00	24.43		A
	ATOM	344	N	LYS A 115	57.096	19.350	−5.360	1.00	24.10		A
	ATOM	345	CA	LYS A 115	58.376	19.493	−4.678	1.00	24.93		A
	ATOM	346	CB	LYS A 115	59.339	18.373	−5.103	1.00	23.72		A
40	ATOM	347	CG	LYS A 115	59.139	17.080	−4.308	1.00	23.09		A
	ATOM	348	CD	LYS A 115	60.064	15.944	−4.743	1.00	21.92		A
	ATOM	349	CE	LYS A 115	59.691	15.400	−6.117	1.00	22.42		A
	ATOM	350	NZ	LYS A 115	60.447	14.150	−6.448	1.00	19.71		A
	ATOM	351	C	LYS A 115	59.031	20.858	−4.868	1.00	26.87		A
45	ATOM	352	O	LYS A 115	59.492	21.469	−3.903	1.00	26.17		A
	ATOM	353	N	ARG A 116	59.058	21.348	−6.102	1.00	28.73		A
	ATOM	354	CA	ARG A 116	59.678	22.638	−6.240	1.00	29.66		A
	ATOM	355	CB	ARG 116	59.533	22.980	−7.868	0.50	31.29		AC1
	ATOM	356	CG	ARG 116	60.047	24.361	−8.267	0.50	33.19		AC1
50	ATOM	357	CD	ARG 116	61.368	24.710	−7.590	0.50	35.13		AC1
	ATOM	358	NE	ARG 116	62.329	23.612	−7.618	0.50	36.12		AC1
	ATOM	359	CZ	ARG 116	63.510	23.648	−7.009	0.50	36.18		AC1
	ATOM	360	NH1	ARG 116	63.871	24.729	−6.332	0.50	36.12		AC1
	ATOM	361	NH2	ARG 116	64.324	22.602	−7.067	0.50	35.77		AC1
55	ATOM	362	C	ARG A 116	59.097	23.761	−5.519	1.00	29.70		A
	ATOM	363	O	ARG A 116	59.843	24.515	−4.889	1.00	29.16		A
	ATOM	364	N	HIS A 117	57.773	23.862	−5.472	1.00	27.22		A
	ATOM	365	CA	HIS A 117	57.126	24.903	−4.681	1.00	26.33		A
	ATOM	366	CB	HIS A 117	55.606	24.835	−4.848	1.00	28.41		A

ATOM	367	CG	HIS A 117	54.881	26.005	-4.258	1.00	31.82	A
ATOM	368	CD2	HIS A 117	55.309	27.249	-3.935	1.00	33.19	A
ATOM	369	ND1	HIS A 117	53.536	25.974	-3.961	1.00	34.30	A
ATOM	370	CE1	HIS A 117	53.165	27.148	-3.480	1.00	34.58	A
ATOM	371	NE2	HIS A 117	54.222	27.940	-3.455	1.00	35.18	A
ATOM	372	C	HIS A 117	57.477	24.780	-3.202	1.00	26.22	A
ATOM	373	O	HIS A 117	57.737	25.776	-2.534	1.00	25.67	A
ATOM	374	N	ILE A 118	57.469	23.554	-2.689	1.00	24.94	A
ATOM	375	CA	ILE A 118	57.792	23.315	-1.285	1.00	23.94	A
ATOM	376	CB	ILE A 118	57.711	21.812	-0.952	1.00	23.50	A
ATOM	377	CG2	ILE A 118	58.374	21.533	0.389	1.00	23.76	A
ATOM	378	CG1	ILE A 118	56.246	21.362	-0.959	1.00	24.42	A
ATOM	379	CD1	ILE A 118	56.066	19.858	-0.834	1.00	28.06	A
ATOM	380	C	ILE A 118	59.195	23.821	-0.958	1.00	23.78	A
ATOM	381	O	ILE A 118	59.402	24.495	0.048	1.00	23.49	A
ATOM	382	N	ILE A 119	60.133	23.489	-1.815	1.00	23.46	A
ATOM	383	CA	ILE A 119	61.534	23.913	-1.619	1.00	25.13	A
ATOM	384	CB	ILE A 119	62.487	23.250	-2.664	1.00	24.25	A
ATOM	385	CG2	ILE A 119	63.858	23.890	-2.617	1.00	22.47	A
ATOM	386	CG1	ILE A 119	62.540	21.738	-2.395	1.00	25.05	A
ATOM	387	CD1	ILE A 119	63.327	20.945	-3.439	1.00	24.62	A
ATOM	388	C	ILE A 119	61.667	25.435	-1.705	1.00	25.96	A
ATOM	389	O	ILE A 119	62.330	26.051	-0.872	1.00	24.78	A
ATOM	390	N	LYS A 120	61.028	26.039	-2.704	1.00	27.67	A
ATOM	391	CA	LYS A 120	61.100	27.489	-2.879	1.00	30.29	A
ATOM	392	CB	LYS A 120	60.242	27.940	-4.060	1.00	32.34	A
ATOM	393	CG	LYS A 120	60.674	27.407	-5.409	1.00	39.30	A
ATOM	394	CD	LYS A 120	59.765	27.950	-6.512	1.00	45.19	A
ATOM	395	CE	LYS A 120	58.294	27.636	-6.218	1.00	46.48	A
ATOM	396	NZ	LYS A 120	57.363	28.155	-7.252	1.00	46.49	A
ATOM	397	C	LYS A 120	60.647	28.247	-1.638	1.00	30.89	A
ATOM	398	O	LYS A 120	61.303	29.198	-1.217	1.00	32.48	A
ATOM	399	N	GLU A 121	59.527	27.825	-1.055	1.00	29.82	A
ATOM	400	CA	GLU A 121	58.986	28.488	0.128	1.00	30.33	A
ATOM	401	CB	GLU A 121	57.455	28.416	0.117	1.00	33.04	A
ATOM	402	CG	GLU A 121	56.794	29.021	-1.120	1.00	36.45	A
ATOM	403	CD	GLU A 121	57.221	30.456	-1.373	1.00	39.88	A
ATOM	404	OE1	GLU A 121	57.200	31.264	-0.420	1.00	40.53	A
ATOM	405	OE2	GLU A 121	57.573	30.778	-2.529	1.00	43.24	A
ATOM	406	C	GLU A 121	59.511	27.930	1.451	1.00	30.37	A
ATOM	407	O	GLU A 121	58.946	28.204	2.513	1.00	31.24	A
ATOM	408	N	ASN A 122	60.588	27.151	1.390	1.00	29.03	A
ATOM	409	CA	ASN A 122	61.183	26.573	2.594	1.00	28.46	A
ATOM	410	CB	ASN A 122	61.836	27.673	3.436	1.00	31.28	A
ATOM	411	CG	ASN A 122	62.945	28.395	2.698	1.00	34.12	A
ATOM	412	OD1	ASN A 122	62.697	29.143	1.754	1.00	35.57	A
ATOM	413	ND2	ASN A 122	64.181	28.169	3.127	1.00	35.73	A
ATOM	414	C	ASN A 122	60.157	25.835	3.456	1.00	26.89	A
ATOM	415	O	ASN A 122	60.085	26.055	4.663	1.00	27.23	A
ATOM	416	N	LYS A 123	59.375	24.955	2.842	1.00	23.99	A
ATOM	417	CA	LYS A 123	58.358	24.210	3.574	1.00	22.43	A
ATOM	418	CB	LYS A 123	57.031	24.248	2.810	1.00	21.97	A
ATOM	419	CG	LYS A 123	56.475	25.645	2.599	1.00	25.68	A
ATOM	420	CD	LYS A 123	56.253	26.354	3.927	1.00	27.54	A
ATOM	421	CE	LYS A 123	55.882	27.796	3.716	1.00	31.30	A
ATOM	422	NZ	LYS A 123	55.756	28.540	5.004	1.00	33.21	A
ATOM	423	C	LYS A 123	58.748	22.759	3.821	1.00	22.20	A
ATOM	424	O	LYS A 123	57.924	21.960	4.264	1.00	22.50	A
ATOM	425	N	VAL A 124	59.997	22.412	3.535	1.00	20.59	A

	ATOM	426	CA	VAL A 124	60.439	21.039	3.730	1.00	20.25	A
	ATOM	427	CB	VAL A 124	61.922	20.850	3.328	1.00	19.43	A
	ATOM	428	CG1	VAL A 124	62.346	19.407	3.573	1.00	18.69	A
	ATOM	429	CG2	VAL A 124	62.104	21.195	1.853	1.00	18.21	A
5	ATOM	430	C	VAL A 124	60.236	20.561	5.163	1.00	19.53	A
	ATOM	431	O	VAL A 124	59.841	19.418	5.385	1.00	20.02	A
	ATOM	432	N	PRO A 125	60.513	21.422	6.159	1.00	20.01	A
	ATOM	433	CD	PRO A 125	61.178	22.738	6.118	1.00	18.69	A
	ATOM	434	CA	PRO A 125	60.318	20.979	7.544	1.00	19.88	A
10	ATOM	435	CB	PRO A 125	60.793	22.180	8.363	1.00	19.95	A
	ATOM	436	CG	PRO A 125	61.839	22.805	7.479	1.00	18.85	A
	ATOM	437	C	PRO A 125	58.848	20.642	7.824	1.00	19.76	A
	ATOM	438	O	PRO A 125	58.544	19.700	8.550	1.00	16.99	A
	ATOM	439	N	TYR A 126	57.947	21.418	7.235	1.00	18.98	A
15	ATOM	440	CA	TYR A 126	56.516	21.220	7.435	1.00	21.97	A
	ATOM	441	CB	TYR A 126	55.752	22.448	6.933	1.00	25.17	A
	ATOM	442	CG	TYR A 126	56.040	23.690	7.748	1.00	30.98	A
	ATOM	443	CD1	TYR A 126	55.438	23.886	8.991	1.00	33.95	A
	ATOM	444	CE1	TYR A 126	55.721	25.015	9.763	1.00	36.60	A
20	ATOM	445	CD2	TYR A 126	56.938	24.657	7.292	1.00	35.43	A
	ATOM	446	CE2	TYR A 126	57.231	25.792	8.058	1.00	37.20	A
	ATOM	447	CZ	TYR A 126	56.618	25.962	9.291	1.00	37.40	A
	ATOM	448	OH	TYR A 126	56.903	27.073	10.052	1.00	40.85	A
	ATOM	449	C	TYR A 126	55.990	19.956	6.762	1.00	21.35	A
25	ATOM	450	O	TYR A 126	55.265	19.175	7.383	1.00	20.49	A
	ATOM	451	N	VAL A 127	56.354	19.746	5.501	1.00	18.16	A
	ATOM	452	CA	VAL A 127	55.892	18.562	4.790	1.00	17.58	A
	ATOM	453	CB	VAL A 127	56.308	18.596	3.308	1.00	17.45	A
	ATOM	454	CG1	VAL A 127	55.786	17.350	2.600	1.00	17.97	A
30	ATOM	455	CG2	VAL A 127	55.751	19.850	2.641	1.00	14.90	A
	ATOM	456	C	VAL A 127	56.459	17.306	5.448	1.00	18.39	A
	ATOM	457	O	VAL A 127	55.769	16.298	5.583	1.00	18.14	A
	ATOM	458	N	THR A 128	57.716	17.381	5.869	1.00	17.50	A
	ATOM	459	CA	THR A 128	58.375	16.260	6.530	1.00	18.54	A
35	ATOM	460	CB	THR A 128	59.861	16.586	6.805	1.00	18.01	A
	ATOM	461	OG1	THR A 128	60.537	16.804	5.559	1.00	21.14	A
	ATOM	462	CG2	THR A 128	60.536	15.446	7.545	1.00	17.95	A
	ATOM	463	C	THR A 128	57.676	15.941	7.856	1.00	19.49	A
	ATOM	464	O	THR A 128	57.438	14.776	8.179	1.00	18.76	A
40	ATOM	465	N	ARG A 129	57.345	16.981	8.619	1.00	19.60	A
	ATOM	466	CA	ARG A 129	56.673	16.804	9.904	1.00	20.12	A
	ATOM	467	CB	ARG A 129	56.534	18.144	10.621	1.00	21.33	A
	ATOM	468	CG	ARG A 129	55.948	18.029	12.023	1.00	28.02	A
	ATOM	469	CD	ARG A 129	55.721	19.404	12.597	1.00	31.25	A
45	ATOM	470	NE	ARG A 129	56.940	20.205	12.560	1.00	37.78	A
	ATOM	471	CZ	ARG A 129	56.962	21.524	12.391	1.00	40.10	A
	ATOM	472	NH1	ARG A 129	55.828	22.197	12.239	1.00	40.03	A
	ATOM	473	NH2	ARG A 129	58.119	22.170	12.374	1.00	44.58	A
	ATOM	474	C	ARG A 129	55.288	16.186	9.729	1.00	20.08	A
50	ATOM	475	O	ARG A 129	54.891	15.305	10.496	1.00	20.40	A
	ATOM	476	N	GLU A 130	54.553	16.654	8.724	1.00	18.79	A
	ATOM	477	CA	GLU A 130	53.222	16.125	8.454	1.00	20.10	A
	ATOM	478	CB	GLU A 130	52.638	16.749	7.183	1.00	19.92	A
	ATOM	479	CG	GLU A 130	51.350	16.087	6.708	1.00	27.85	A
55	ATOM	480	CD	GLU A 130	50.581	16.933	5.707	1.00	29.72	A
	ATOM	481	OE1	GLU A 130	51.216	17.528	4.814	1.00	33.46	A
	ATOM	482	OE2	GLU A 130	49.338	16.996	5.807	1.00	30.74	A
	ATOM	483	C	GLU A 130	53.301	14.615	8.295	1.00	19.81	A
	ATOM	484	O	GLU A 130	52.553	13.875	8.935	1.00	18.37	A

	ATOM	485	N	ARG A 131	54.219	14.162	7.447	1.00 20.41	A
	ATOM	486	CA	ARG A 131	54.397	12.735	7.202	1.00 22.45	A
	ATOM	487	CB	ARG A 131	55.442	12.511	6.098	1.00 25.16	A
	ATOM	488	CG	ARG A 131	55.742	11.043	5.840	1.00 28.75	A
5	ATOM	489	CD	ARG A 131	56.736	10.837	4.708	1.00 33.75	A
	ATOM	490	NE	ARG A 131	57.020	9.415	4.520	1.00 40.07	A
	ATOM	491	CZ	ARG A 131	57.756	8.915	3.532	1.00 43.07	A
	ATOM	492	NH1	ARG A 131	58.293	9.721	2.625	1.00 44.91	A
	ATOM	493	NH2	ARG A 131	57.955	7.606	3.449	1.00 44.45	A
10	ATOM	494	C	ARG A 131	54.820	11.982	8.466	1.00 23.24	A
	ATOM	495	O	ARG A 131	54.241	10.948	8.804	1.00 23.86	A
	ATOM	496	N	ASP A 132	55.831	12.497	9.160	1.00 21.99	A
	ATOM	497	CA	ASP A 132	56.318	11.850	10.370	1.00 22.04	A
	ATOM	498	CB	ASP A 132	57.570	12.564	10.888	1.00 23.72	A
15	ATOM	499	CG	ASP A 132	58.750	12.442	9.932	1.00 27.77	A
	ATOM	500	OD1	ASP A 132	58.681	11.620	8.989	1.00 27.34	A
	ATOM	501	OD2	ASP A 132	59.753	13.163	10.128	1.00 28.70	A
	ATOM	502	C	ASP A 132	55.258	11.772	11.474	1.00 21.69	A
	ATOM	503	O	ASP A 132	55.077	10.723	12.092	1.00 22.75	A
20	ATOM	504	N	VAL A 133	54.551	12.868	11.725	1.00 19.54	A
	ATOM	505	CA	VAL A 133	53.525	12.843	12.759	1.00 18.52	A
	ATOM	506	CB	VAL A 133	52.908	14.244	12.990	1.00 19.26	A
	ATOM	507	CG1	VAL A 133	51.708	14.135	13.918	1.00 18.79	A
	ATOM	508	CG2	VAL A 133	53.953	15.180	13.604	1.00 18.80	A
25	ATOM	509	C	VAL A 133	52.419	11.854	12.398	1.00 19.46	A
	ATOM	510	O	VAL A 133	52.073	10.991	13.200	1.00 19.94	A
	ATOM	511	N	MET A 134	51.878	11.957	11.187	1.00 19.15	A
	ATOM	512	CA	MET A 134	50.807	11.052	10.792	1.00 21.25	A
	ATOM	513	CB	MET A 134	50.309	11.381	9.383	1.00 17.34	A
30	ATOM	514	CG	MET A 134	49.615	12.730	9.302	1.00 20.00	A
	ATOM	515	SD	MET A 134	48.643	12.952	7.798	1.00 24.21	A
	ATOM	516	CE	MET A 134	47.033	12.434	8.400	1.00 23.20	A
	ATOM	517	C	MET A 134	51.203	9.582	10.881	1.00 22.43	A
	ATOM	518	O	MET A 134	50.384	8.741	11.249	1.00 23.82	A
35	ATOM	519	N	SER A 135	52.454	9.273	10.556	1.00 23.09	A
	ATOM	520	CA	SER A 135	52.939	7.895	10.615	1.00 26.13	A
	ATOM	521	CB	SER A 135	54.356	7.798	10.039	1.00 26.17	A
	ATOM	522	OG	SER A 135	54.383	8.177	8.673	1.00 31.91	A
	ATOM	523	C	SER A 135	52.957	7.358	12.045	1.00 26.58	A
40	ATOM	524	O	SER A 135	52.926	6.148	12.261	1.00 26.42	A
	ATOM	525	N	ARG A 136	53.014	8.261	13.018	1.00 25.65	A
	ATOM	526	CA	ARG A 136	53.056	7.870	14.425	1.00 27.47	A
	ATOM	527	CB	ARG A 136	53.823	8.914	15.238	1.00 27.97	A
	ATOM	528	CG	ARG A 136	55.283	9.082	14.857	1.00 32.00	A
45	ATOM	529	CD	ARG A 136	55.904	10.218	15.664	1.00 33.03	A
	ATOM	530	NE	ARG A 136	55.602	10.073	17.084	1.00 36.11	A
	ATOM	531	CZ	ARG A 136	55.867	10.990	18.007	1.00 39.74	A
	ATOM	532	NH1	ARG A 136	56.449	12.132	17.661	1.00 40.55	A
	ATOM	533	NH2	ARG A 136	55.540	10.769	19.276	1.00 36.72	A
50	ATOM	534	C	ARG A 136	51.667	7.709	15.036	1.00 26.38	A
	ATOM	535	O	ARG A 136	51.516	7.121	16.106	1.00 27.06	A
	ATOM	536	N	LEU A 137	50.655	8.235	14.360	1.00 24.77	A
	ATOM	537	CA	LEU A 137	49.294	8.162	14.870	1.00 24.70	A
	ATOM	538	CB	LEU A 137	48.483	9.363	14.371	1.00 24.52	A
55	ATOM	539	CG	LEU A 137	49.050	10.760	14.662	1.00 26.67	A
	ATOM	540	CD1	LEU A 137	48.075	11.813	14.141	1.00 27.25	A
	ATOM	541	CD2	LEU A 137	49.279	10.945	16.155	1.00 27.09	A
	ATOM	542	C	LEU A 137	48.592	6.868	14.473	1.00 25.20	A
	ATOM	543	O	LEU A 137	48.619	6.469	13.309	1.00 25.99	A

	ATOM	544	N	ASP A 138	47.971	6.218	15.451	1.00 21.89		A
	ATOM	545	CA	ASP A 138	47.239	4.977	15.219	1.00 21.35		A
	ATOM	546	CB	ASP A 138	48.124	3.761	15.523	1.00 22.14		A
	ATOM	547	CG	ASP A 138	47.432	2.448	15.201	1.00 24.90		A
5	ATOM	548	OD1	ASP A 138	46.631	2.423	14.241	1.00 24.78		A
	ATOM	549	OD2	ASP A 138	47.691	1.443	15.897	1.00 25.39		A
	ATOM	550	C	ASP A 138	46.031	4.991	16.138	1.00 20.47		A
	ATOM	551	O	ASP A 138	45.967	4.248	17.118	1.00 19.06		A
	ATOM	552	N	HIS A 139	45.075	5.852	15.810	1.00 18.27		A
10	ATOM	553	CA	HIS A 139	43.869	6.016	16.606	1.00 18.21		A
	ATOM	554	CB	HIS A 139	44.096	7.157	17.612	1.00 15.84		A
	ATOM	555	CG	HIS A 139	42.985	7.332	18.600	1.00 15.24		A
	ATOM	556	CD2	HIS A 139	42.884	6.964	19.900	1.00 13.97		A
	ATOM	557	ND1	HIS A 139	41.791	7.943	18.280	1.00 14.74		A
15	ATOM	558	CE1	HIS A 139	41.002	7.944	19.341	1.00 14.19		A
	ATOM	559	NE2	HIS A 139	41.641	7.356	20.336	1.00 14.15		A
	ATOM	560	C	HIS A 139	42.715	6.330	15.654	1.00 18.50		A
	ATOM	561	O	HIS A 139	42.879	7.080	14.693	1.00 20.80		A
	ATOM	562	N	PRO A 140	41.527	5.767	15.913	1.00 18.32		A
20	ATOM	563	CD	PRO A 140	41.143	4.984	17.100	1.00 16.71		A
	ATOM	564	CA	PRO A 140	40.367	6.001	15.048	1.00 17.43		A
	ATOM	565	CB	PRO A 140	39.273	5.157	15.704	1.00 16.64		A
	ATOM	566	CG	PRO A 140	39.643	5.204	17.152	1.00 18.43		A
	ATOM	567	C	PRO A 140	39.914	7.441	14.803	1.00 18.77		A
25	ATOM	568	O	PRO A 140	39.207	7.695	13.831	1.00 19.88		A
	ATOM	569	N	PHE A 141	40.301	8.381	15.664	1.00 17.14		A
	ATOM	570	CA	PHE A 141	39.874	9.767	15.477	1.00 16.42		A
	ATOM	571	CB	PHE A 141	39.568	10.422	16.836	1.00 14.60		A
	ATOM	572	CG	PHE A 141	38.386	9.817	17.556	1.00 15.26		A
30	ATOM	573	CD1	PHE A 141	37.335	9.234	16.842	1.00 14.78		A
	ATOM	574	CD2	PHE A 141	38.297	9.880	18.942	1.00 13.70		A
	ATOM	575	CE1	PHE A 141	36.215	8.727	17.502	1.00 16.94		A
	ATOM	576	CE2	PHE A 141	37.178	9.375	19.615	1.00 15.75		A
	ATOM	577	CZ	PHE A 141	36.135	8.799	18.893	1.00 16.89		A
35	ATOM	578	C	PHE A 141	40.857	10.641	14.694	1.00 16.15		A
	ATOM	579	O	PHE A 141	40.799	11.871	14.761	1.00 17.35		A
	ATOM	580	N	PHE A 142	41.748	10.011	13.941	1.00 15.88		A
	ATOM	581	CA	PHE A 142	42.727	10.756	13.154	1.00 17.89		A
	ATOM	582	CB	PHE A 142	44.115	10.645	13.793	1.00 17.57		A
40	ATOM	583	CG	PHE A 142	44.240	11.371	15.103	1.00 18.74		A
	ATOM	584	CD1	PHE A 142	44.559	12.726	15.135	1.00 17.77		A
	ATOM	585	CD2	PHE A 142	43.997	10.711	16.304	1.00 18.74		A
	ATOM	586	CE1	PHE A 142	44.632	13.417	16.347	1.00 15.77		A
	ATOM	587	CE2	PHE A 142	44.065	11.393	17.522	1.00 17.56		A
45	ATOM	588	CZ	PHE A 142	44.383	12.747	17.542	1.00 17.14		A
	ATOM	589	C	PHE A 142	42.793	10.231	11.729	1.00 19.12		A
	ATOM	590	O	PHE A 142	42.659	9.030	11.504	1.00 20.01		A
	ATOM	591	N	VAL A 143	42.978	11.135	10.769	1.00 18.72		A
	ATOM	592	CA	VAL A 143	43.102	10.735	9.371	1.00 18.52		A
50	ATOM	593	CB	VAL A 143	43.294	11.961	8.440	1.00 20.66		A
	ATOM	594	CG1	VAL A 143	43.843	11.521	7.080	1.00 21.29		A
	ATOM	595	CG2	VAL A 143	41.958	12.673	8.252	1.00 22.97		A
	ATOM	596	C	VAL A 143	44.342	9.865	9.330	1.00 18.68		A
	ATOM	597	O	VAL A 143	45.355	10.199	9.943	1.00 18.42		A
55	ATOM	598	N	LYS A 144	44.259	8.745	8.623	1.00 18.30		A
	ATOM	599	CA	LYS A 144	45.384	7.824	8.535	1.00 18.78		A
	ATOM	600	CB	LYS A 144	44.889	6.373	8.608	1.00 22.27		A
	ATOM	601	CG	LYS A 144	46.017	5.340	8.557	1.00 29.72		A
	ATOM	602	CD	LYS A 144	45.491	3.912	8.674	1.00 34.16		A

	ATOM	603	CE	LYS A 144	46.631	2.896	8.577	1.00 37.67	A
	ATOM	604	NZ	LYS A 144	46.138	1.484	8.629	1.00 39.02	A
	ATOM	605	C	LYS A 144	46.192	8.002	7.261	1.00 18.53	A
	ATOM	606	O	LYS A 144	45.643	8.314	6.200	1.00 18.18	A
5	ATOM	607	N	LEU A 145	47.502	7.816	7.385	1.00 16.79	A
	ATOM	608	CA	LEU A 145	48.411	7.900	6.251	1.00 17.45	A
	ATOM	609	CB	LEU 145	49.686	8.653	6.641	0.50 18.82	AC1
	ATOM	610	CG	LEU 145	50.734	8.902	5.549	0.50 20.23	AC1
	ATOM	611	CD1	LEU 145	51.836	9.799	6.093	0.50 18.83	AC1
10	ATOM	612	CD2	LEU 145	51.317	7.581	5.069	0.50 19.79	AC1
	ATOM	613	C	LEU A 145	48.739	6.450	5.907	1.00 19.19	A
	ATOM	614	O	LEU A 145	49.451	5.772	6.659	1.00 17.36	A
	ATOM	615	N	TYR A 146	48.215	5.972	4.782	1.00 17.28	A
	ATOM	616	CA	TYR A 146	48.444	4.593	4.358	1.00 17.57	A
15	ATOM	617	CB	TYR A 146	47.288	4.098	3.486	1.00 17.74	A
	ATOM	618	CG	TYR A 146	45.981	3.926	4.214	1.00 17.50	A
	ATOM	619	CD1	TYR A 146	45.099	4.995	4.377	1.00 16.50	A
	ATOM	620	CE1	TYR A 146	43.881	4.827	5.039	1.00 17.10	A
	ATOM	621	CD2	TYR A 146	45.620	2.686	4.735	1.00 18.28	A
20	ATOM	622	CE2	TYR A 146	44.411	2.506	5.399	1.00 19.84	A
	ATOM	623	CZ	TYR A 146	43.547	3.576	5.544	1.00 17.53	A
	ATOM	624	OH	TYR A 146	42.342	3.376	6.169	1.00 20.67	A
	ATOM	625	C	TYR A 146	49.735	4.376	3.582	1.00 18.72	A
	ATOM	626	O	TYR A 146	50.382	3.338	3.715	1.00 19.51	A
25	ATOM	627	N	PHE A 147	50.110	5.350	2.765	1.00 18.09	A
	ATOM	628	CA	PHE A 147	51.307	5.203	1.952	1.00 17.20	A
	ATOM	629	CB	PHE A 147	51.007	4.258	0.783	1.00 16.77	A
	ATOM	630	CG	PHE A 147	49.835	4.699	-0.070	1.00 17.75	A
	ATOM	631	CD1	PHE A 147	49.967	5.752	-0.975	1.00 16.58	A
30	ATOM	632	CD2	PHE A 147	48.595	4.075	0.053	1.00 18.07	A
	ATOM	633	CE1	PHE A 147	48.886	6.178	-1.742	1.00 19.62	A
	ATOM	634	CE2	PHE A 147	47.503	4.492	-0.710	1.00 18.56	A
	ATOM	635	CZ	PHE A 147	47.647	5.546	-1.610	1.00 19.27	A
	ATOM	636	C	PHE A 147	51.768	6.533	1.395	1.00 17.13	A
35	ATOM	637	O	PHE A 147	51.045	7.528	1.452	1.00 14.43	A
	ATOM	638	N	THR A 148	52.981	6.534	0.854	1.00 17.12	A
	ATOM	639	CA	THR A 148	53.541	7.718	0.232	1.00 17.96	A
	ATOM	640	CB	THR A 148	54.449	8.531	1.197	1.00 21.51	A
	ATOM	641	OG1	THR A 148	55.605	7.760	1.537	1.00 18.83	A
40	ATOM	642	CG2	THR A 148	53.700	8.897	2.472	1.00 19.60	A
	ATOM	643	C	THR A 148	54.386	7.262	-0.946	1.00 20.31	A
	ATOM	644	O	THR A 148	54.860	6.124	-0.991	1.00 18.94	A
	ATOM	645	N	PHE A 149	54.543	8.149	-1.916	1.00 19.16	A
	ATOM	646	CA	PHE A 149	55.368	7.877	-3.073	1.00 18.01	A
45	ATOM	647	CB	PHE A 149	54.748	6.801	-3.989	1.00 17.23	A
	ATOM	648	CG	PHE A 149	53.389	7.144	-4.544	1.00 16.88	A
	ATOM	649	CD1	PHE A 149	53.262	7.888	-5.712	1.00 18.58	A
	ATOM	650	CD2	PHE A 149	52.235	6.668	-3.927	1.00 17.31	A
	ATOM	651	CE1	PHE A 149	52.007	8.149	-6.267	1.00 19.26	A
50	ATOM	652	CE2	PHE A 149	50.972	6.923	-4.470	1.00 19.17	A
	ATOM	653	CZ	PHE A 149	50.858	7.663	-5.642	1.00 19.60	A
	ATOM	654	C	PHE A 149	55.542	9.205	-3.774	1.00 20.85	A
	ATOM	655	O	PHE A 149	54.934	10.200	-3.376	1.00 19.76	A
	ATOM	656	N	GLN A 150	56.398	9.241	-4.782	1.00 19.79	A
55	ATOM	657	CA	GLN A 150	56.636	10.481	-5.497	1.00 24.03	A
	ATOM	658	CB	GLN A 150	57.659	11.347	-4.739	1.00 24.45	A
	ATOM	659	CG	GLN A 150	58.986	10.645	-4.414	1.00 26.28	A
	ATOM	660	CD	GLN A 150	59.988	11.558	-3.692	1.00 29.02	A
	ATOM	661	OE1	GLN A 150	60.693	12.353	-4.321	1.00 27.05	A

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     ATOM    662  NE2  GLN A 150     60.042  11.449  -2.365  1.00 26.47      A
     ATOM    663  C    GLN A 150     57.160  10.203  -6.885  1.00 23.88      A
     ATOM    664  O    GLN A 150     57.673   9.118  -7.158  1.00 24.79      A
     ATOM    665  N    ASP A 151     56.987  11.171  -7.774  1.00 25.88      A
 5   ATOM    666  CA   ASP A 151     57.527  11.047  -9.117  1.00 26.49      A
     ATOM    667  CB   ASP A 151     56.437  11.126 -10.199  1.00 24.54      A
     ATOM    668  CG   ASP A 151     55.544  12.336 -10.064  1.00 24.95      A
     ATOM    669  OD1  ASP A 151     56.005  13.379  -9.561  1.00 22.44      A
     ATOM    670  OD2  ASP A 151     54.369  12.242 -10.490  1.00 25.72      A
10   ATOM    671  C    ASP A 151     58.515  12.203  -9.220  1.00 28.63      A
     ATOM    672  O    ASP A 151     58.890  12.780  -8.194  1.00 27.83      A
     ATOM    673  N    ASP A 152     58.934  12.560 -10.426  1.00 29.21      A
     ATOM    674  CA   ASP A 152     59.907  13.636 -10.562  1.00 31.88      A
     ATOM    675  CB   ASP A 152     60.325  13.792 -12.026  1.00 33.94      A
15   ATOM    676  CG   ASP A 152     61.033  12.564 -12.557  1.00 38.88      A
     ATOM    677  OD1  ASP A 152     61.817  11.959 -11.791  1.00 39.67      A
     ATOM    678  OD2  ASP A 152     60.817  12.211 -13.738  1.00 41.57      A
     ATOM    679  C    ASP A 152     59.487  14.994 -10.013  1.00 30.90      A
     ATOM    680  O    ASP A 152     60.316  15.735  -9.482  1.00 31.69      A
20   ATOM    681  N    GLU A 153     58.207  15.322 -10.107  1.00 29.44      A
     ATOM    682  CA   GLU A 153     57.767  16.632  -9.646  1.00 28.69      A
     ATOM    683  CB   GLU A 153     56.984  17.327 -10.766  1.00 32.90      A
     ATOM    684  CG   GLU A 153     57.451  16.987 -12.183  1.00 40.57      A
     ATOM    685  CD   GLU A 153     56.920  15.643 -12.675  1.00 45.78      A
25   ATOM    686  OE1  GLU A 153     55.682  15.482 -12.760  1.00 48.91      A
     ATOM    687  OE2  GLU A 153     57.736  14.747 -12.979  1.00 48.95      A
     ATOM    688  C    GLU A 153     56.929  16.683  -8.372  1.00 26.43      A
     ATOM    689  O    GLU A 153     56.947  17.688  -7.660  1.00 25.08      A
     ATOM    690  N    LYS A 154     56.205  15.610  -8.069  1.00 22.39      A
30   ATOM    691  CA   LYS A 154     55.318  15.631  -6.912  1.00 21.43      A
     ATOM    692  CB   LYS A 154     53.861  15.628  -7.398  1.00 20.33      A
     ATOM    693  CG   LYS A 154     53.505  16.716  -8.403  1.00 21.92      A
     ATOM    694  CD   LYS A 154     52.211  16.375  -9.146  1.00 19.70      A
     ATOM    695  CE   LYS A 154     51.775  17.503 -10.077  1.00 20.04      A
35   ATOM    696  NZ   LYS A 154     50.631  17.094 -10.951  1.00 19.97      A
     ATOM    697  C    LYS A 154     55.458  14.522  -5.881  1.00 20.43      A
     ATOM    698  O    LYS A 154     55.949  13.426  -6.173  1.00 21.13      A
     ATOM    699  N    LEU A 155     54.985  14.832  -4.676  1.00 19.69      A
     ATOM    700  CA   LEU A 155     54.950  13.900  -3.553  1.00 19.10      A
40   ATOM    701  CB   LEU A 155     55.362  14.588  -2.252  1.00 19.65      A
     ATOM    702  CG   LEU A 155     56.740  15.234  -2.129  1.00 21.20      A
     ATOM    703  CD1  LEU A 155     56.848  15.918  -0.770  1.00 23.42      A
     ATOM    704  CD2  LEU A 155     57.816  14.174  -2.277  1.00 23.08      A
     ATOM    705  C    LEU A 155     53.478  13.507  -3.427  1.00 18.87      A
45   ATOM    706  O    LEU A 155     52.600  14.348  -3.620  1.00 18.61      A
     ATOM    707  N    TYR A 156     53.209  12.249  -3.091  1.00 15.02      A
     ATOM    708  CA   TYR A 156     51.834  11.783  -2.934  1.00 16.29      A
     ATOM    709  CB   TYR A 156     51.470  10.769  -4.029  1.00 14.20      A
     ATOM    710  CG   TYR A 156     51.603  11.273  -5.449  1.00 17.29      A
50   ATOM    711  CD1  TYR A 156     52.857  11.429  -6.045  1.00 16.46      A
     ATOM    712  CE1  TYR A 156     52.978  11.884  -7.360  1.00 18.68      A
     ATOM    713  CD2  TYR A 156     50.474  11.588  -6.202  1.00 16.43      A
     ATOM    714  CE2  TYR A 156     50.583  12.048  -7.512  1.00 16.31      A
     ATOM    715  CZ   TYR A 156     51.835  12.192  -8.083  1.00 18.17      A
55   ATOM    716  OH   TYR A 156     51.941  12.651  -9.371  1.00 17.47      A
     ATOM    717  C    TYR A 156     51.657  11.108  -1.572  1.00 16.32      A
     ATOM    718  O    TYR A 156     52.412  10.197  -1.235  1.00 16.25      A
     ATOM    719  N    PHE A 157     50.678  11.568  -0.792  1.00 15.47      A
     ATOM    720  CA   PHE A 157     50.385  10.966   0.508  1.00 16.66      A
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      ATOM    721  CB   PHE A 157     50.324  12.014   1.629  1.00 16.91      A
      ATOM    722  CG   PHE A 157     51.631  12.708   1.907  1.00 18.96      A
      ATOM    723  CD1  PHE A 157     52.821  12.261   1.340  1.00 20.31      A
      ATOM    724  CD2  PHE A 157     51.664  13.829   2.732  1.00 21.12      A
 5    ATOM    725  CE1  PHE A 157     54.025  12.926   1.585  1.00 22.08      A
      ATOM    726  CE2  PHE A 157     52.865  14.500   2.982  1.00 22.18      A
      ATOM    727  CZ   PHE A 157     54.045  14.045   2.405  1.00 21.27      A
      ATOM    728  C    PHE A 157     49.016  10.308   0.404  1.00 16.52      A
      ATOM    729  O    PHE A 157     48.029  10.979   0.110  1.00 17.32      A
10    ATOM    730  N    GLY A 158     48.953   9.002   0.644  1.00 15.97      A
      ATOM    731  CA   GLY A 158     47.684   8.299   0.572  1.00 16.13      A
      ATOM    732  C    GLY A 158     47.000   8.383   1.920  1.00 14.94      A
      ATOM    733  O    GLY A 158     47.445   7.756   2.879  1.00 16.28      A
      ATOM    734  N    LEU A 159     45.915   9.145   1.989  1.00 13.50      A
15    ATOM    735  CA   LEU A 159     45.191   9.340   3.241  1.00 15.20      A
      ATOM    736  CB   LEU A 159     45.031  10.835   3.517  1.00 14.20      A
      ATOM    737  CG   LEU A 159     46.270  11.726   3.385  1.00 19.00      A
      ATOM    738  CD1  LEU A 159     45.847  13.188   3.477  1.00 17.12      A
      ATOM    739  CD2  LEU A 159     47.275  11.390   4.471  1.00 14.71      A
20    ATOM    740  C    LEU A 159     43.809   8.716   3.232  1.00 15.53      A
      ATOM    741  O    LEU A 159     43.232   8.472   2.177  1.00 16.05      A
      ATOM    742  N    SER A 160     43.268   8.469   4.418  1.00 15.86      A
      ATOM    743  CA   SER A 160     41.932   7.917   4.498  1.00 19.01      A
      ATOM    744  CB   SER A 160     41.566   7.582   5.949  1.00 22.90      A
25    ATOM    745  OG   SER A 160     41.901   8.629   6.833  1.00 24.18      A
      ATOM    746  C    SER A 160     40.987   8.968   3.924  1.00 20.43      A
      ATOM    747  O    SER A 160     41.213  10.173   4.062  1.00 19.96      A
      ATOM    748  N    TYR A 161     39.945   8.508   3.250  1.00 19.20      A
      ATOM    749  CA   TYR A 161     38.975   9.406   2.644  1.00 20.37      A
30    ATOM    750  CB   TYR A 161     38.471   8.785   1.332  1.00 20.00      A
      ATOM    751  CG   TYR A 161     37.314   9.502   0.666  1.00 20.72      A
      ATOM    752  CD1  TYR A 161     37.222  10.895   0.682  1.00 18.22      A
      ATOM    753  CE1  TYR A 161     36.180  11.557   0.029  1.00 22.24      A
      ATOM    754  CD2  TYR A 161     36.333   8.784  -0.020  1.00 20.53      A
35    ATOM    755  CE2  TYR A 161     35.287   9.436  -0.678  1.00 24.24      A
      ATOM    756  CZ   TYR A 161     35.218  10.822  -0.648  1.00 22.32      A
      ATOM    757  OH   TYR A 161     34.194  11.471  -1.298  1.00 23.03      A
      ATOM    758  C    TYR A 161     37.812   9.681   3.598  1.00 20.14      A
      ATOM    759  O    TYR A 161     36.959   8.819   3.810  1.00 19.53      A
40    ATOM    760  N    ALA A 162     37.791  10.880   4.178  1.00 19.92      A
      ATOM    761  CA   ALA A 162     36.721  11.271   5.099  1.00 21.07      A
      ATOM    762  CB   ALA A 162     37.187  12.419   6.002  1.00 19.60      A
      ATOM    763  C    ALA A 162     35.542  11.712   4.238  1.00 22.07      A
      ATOM    764  O    ALA A 162     35.436  12.875   3.860  1.00 20.66      A
45    ATOM    765  N    LYS A 163     34.653  10.769   3.945  1.00 23.27      A
      ATOM    766  CA   LYS A 163     33.503  11.017   3.080  1.00 27.12      A
      ATOM    767  CB   LYS A 163     32.663   9.741   2.963  1.00 29.68      A
      ATOM    768  CG   LYS A 163     33.455   8.524   2.515  1.00 37.67      A
      ATOM    769  CD   LYS A 163     32.556   7.310   2.321  1.00 42.24      A
50    ATOM    770  CE   LYS A 163     33.373   6.034   2.185  1.00 44.48      A
      ATOM    771  NZ   LYS A 163     34.143   5.735   3.430  1.00 44.88      A
      ATOM    772  C    LYS A 163     32.581  12.186   3.411  1.00 25.78      A
      ATOM    773  O    LYS A 163     32.103  12.863   2.506  1.00 26.53      A
      ATOM    774  N    ASN A 164     32.327  12.441   4.689  1.00 24.57      A
55    ATOM    775  CA   ASN A 164     31.420  13.522   5.033  1.00 23.77      A
      ATOM    776  CB   ASN A 164     30.610  13.129   6.265  1.00 25.02      A
      ATOM    777  CG   ASN A 164     29.537  12.101   5.932  1.00 27.54      A
      ATOM    778  OD1  ASN A 164     28.772  12.281   4.983  1.00 28.79      A
      ATOM    779  ND2  ASN A 164     29.475  11.024   6.704  1.00 27.13      A
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	ATOM	780	C	ASN A 164	31.999	14.931	5.169	1.00 24.43	A
	ATOM	781	O	ASN A 164	31.306	15.856	5.589	1.00 23.98	A
	ATOM	782	N	GLY A 165	33.262	15.097	4.795	1.00 21.56	A
	ATOM	783	CA	GLY A 165	33.873	16.414	4.836	1.00 24.39	A
5	ATOM	784	C	GLY A 165	34.191	17.043	6.181	1.00 23.62	A
	ATOM	785	O	GLY A 165	34.380	16.352	7.177	1.00 23.26	A
	ATOM	786	N	GLU A 166	34.234	18.373	6.186	1.00 23.22	A
	ATOM	787	CA	GLU A 166	34.563	19.176	7.362	1.00 24.54	A
	ATOM	788	CB	GLU A 166	35.055	20.558	6.913	1.00 25.04	A
10	ATOM	789	CG	GLU A 166	36.419	20.569	6.229	1.00 26.48	A
	ATOM	790	CD	GLU A 166	36.699	21.889	5.517	1.00 30.02	A
	ATOM	791	OE1	GLU A 166	36.081	22.906	5.889	1.00 29.33	A
	ATOM	792	OE2	GLU A 166	37.544	21.916	4.596	1.00 30.48	A
	ATOM	793	C	GLU A 166	33.436	19.372	8.369	1.00 24.44	A
15	ATOM	794	O	GLU A 166	32.279	19.541	8.001	1.00 22.76	A
	ATOM	795	N	LEU A 167	33.791	19.370	9.649	1.00 22.95	A
	ATOM	796	CA	LEU A 167	32.813	19.581	10.707	1.00 22.26	A
	ATOM	797	CB	LEU A 167	33.497	19.481	12.073	1.00 22.32	A
	ATOM	798	CG	LEU A 167	32.706	19.923	13.306	1.00 22.04	A
20	ATOM	799	CD1	LEU A 167	31.454	19.074	13.463	1.00 19.66	A
	ATOM	800	CD2	LEU A 167	33.597	19.805	14.537	1.00 21.17	A
	ATOM	801	C	LEU A 167	32.193	20.971	10.529	1.00 23.49	A
	ATOM	802	O	LEU A 167	31.047	21.209	10.907	1.00 23.56	A
	ATOM	803	N	LEU A 168	32.960	21.887	9.948	1.00 24.25	A
25	ATOM	804	CA	LEU A 168	32.473	23.245	9.722	1.00 26.64	A
	ATOM	805	CB	LEU A 168	33.560	24.099	9.066	1.00 25.62	A
	ATOM	806	CG	LEU A 168	33.198	25.546	8.707	1.00 27.34	A
	ATOM	807	CD1	LEU A 168	32.718	26.296	9.946	1.00 26.42	A
	ATOM	808	CD2	LEU A 168	34.418	26.238	8.119	1.00 26.74	A
30	ATOM	809	C	LEU A 168	31.234	23.218	8.829	1.00 27.13	A
	ATOM	810	O	LEU A 168	30.297	23.989	9.030	1.00 26.01	A
	ATOM	811	N	LYS A 169	31.233	22.320	7.848	1.00 26.41	A
	ATOM	812	CA	LYS A 169	30.106	22.210	6.934	1.00 27.70	A
	ATOM	813	CB	LYS A 169	30.324	21.064	5.945	1.00 30.49	A
35	ATOM	814	CG	LYS A 169	29.151	20.854	4.993	1.00 32.47	A
	ATOM	815	CD	LYS A 169	29.407	19.728	3.998	1.00 35.98	A
	ATOM	816	CE	LYS A 169	29.462	18.372	4.683	1.00 38.53	A
	ATOM	817	NZ	LYS A 169	29.622	17.263	3.702	1.00 41.00	A
	ATOM	818	C	LYS A 169	28.801	21.985	7.682	1.00 28.12	A
40	ATOM	819	O	LYS A 169	27.785	22.608	7.371	1.00 28.08	A
	ATOM	820	N	TYR A 170	28.826	21.094	8.668	1.00 26.53	A
	ATOM	821	CA	TYR A 170	27.624	20.791	9.434	1.00 26.95	A
	ATOM	822	CB	TYR A 170	27.810	19.476	10.193	1.00 25.03	A
	ATOM	823	CG	TYR A 170	27.898	18.300	9.251	1.00 26.65	A
45	ATOM	824	CD1	TYR A 170	26.745	17.661	8.790	1.00 28.27	A
	ATOM	825	CE1	TYR A 170	26.814	16.642	7.839	1.00 26.85	A
	ATOM	826	CD2	TYR A 170	29.127	17.884	8.742	1.00 27.83	A
	ATOM	827	CE2	TYR A 170	29.209	16.869	7.792	1.00 27.19	A
	ATOM	828	CZ	TYR A 170	28.049	16.254	7.343	1.00 30.02	A
50	ATOM	829	OH	TYR A 170	28.130	15.268	6.382	1.00 29.23	A
	ATOM	830	C	TYR A 170	27.229	21.918	10.376	1.00 27.59	A
	ATOM	831	O	TYR A 170	26.045	22.122	10.642	1.00 29.25	A
	ATOM	832	N	ILE A 171	28.208	22.660	10.882	1.00 28.16	A
	ATOM	833	CA	ILE A 171	27.883	23.770	11.763	1.00 29.03	A
55	ATOM	834	CB	ILE A 171	29.151	24.435	12.337	1.00 27.51	A
	ATOM	835	CG2	ILE A 171	28.773	25.705	13.084	1.00 27.97	A
	ATOM	836	CG1	ILE A 171	29.872	23.458	13.272	1.00 26.70	A
	ATOM	837	CD1	ILE A 171	31.163	23.996	13.856	1.00 24.07	A
	ATOM	838	C	ILE A 171	27.094	24.796	10.944	1.00 31.41	A

	ATOM	839	O	ILE A 171	26.088	25.335	11.407	1.00	31.69		A
	ATOM	840	N	ARG A 172	27.546	25.047	9.719	1.00	33.21		A
	ATOM	841	CA	ARG A 172	26.874	26.000	8.844	1.00	36.54		A
	ATOM	842	CB	ARG A 172	27.734	26.314	7.616	1.00	37.73		A
5	ATOM	843	CG	ARG A 172	29.057	27.011	7.912	1.00	41.65		A
	ATOM	844	CD	ARG A 172	29.708	27.492	6.616	1.00	45.29		A
	ATOM	845	NE	ARG A 172	31.037	28.070	6.812	1.00	48.51		A
	ATOM	846	CZ	ARG A 172	31.314	29.059	7.658	1.00	51.53		A
	ATOM	847	NH1	ARG A 172	30.355	29.593	8.406	1.00	53.75		A
10	ATOM	848	NH2	ARG A 172	32.553	29.526	7.748	1.00	51.21		A
	ATOM	849	C	ARG A 172	25.528	25.459	8.378	1.00	37.67		A
	ATOM	850	O	ARG A 172	24.550	26.200	8.288	1.00	39.09		A
	ATOM	851	N	LYS A 173	25.481	24.163	8.092	1.00	38.44		A
	ATOM	852	CA	LYS A 173	24.259	23.528	7.619	1.00	39.25		A
15	ATOM	853	CB	LYS A 173	24.523	22.061	7.272	1.00	41.89		A
	ATOM	854	CG	LYS A 173	23.279	21.298	6.830	1.00	45.52		A
	ATOM	855	CD	LYS A 173	23.557	19.808	6.653	1.00	49.60		A
	ATOM	856	CE	LYS A 173	24.477	19.530	5.469	1.00	52.63		A
	ATOM	857	NZ	LYS A 173	23.855	19.894	4.160	1.00	54.61		A
20	ATOM	858	C	LYS A 173	23.089	23.608	8.555	1.00	39.30		A
	ATOM	859	O	LYS A 173	21.981	23.960	8.201	1.00	39.62		A
	ATOM	860	N	ILE A 174	23.320	23.282	9.863	1.00	37.96		A
	ATOM	861	CA	ILE A 174	22.229	23.314	10.833	1.00	37.36		A
	ATOM	862	CB	ILE A 174	22.159	21.998	11.652	1.00	37.44		A
25	ATOM	863	CG2	ILE A 174	22.058	20.802	10.709	1.00	38.37		A
	ATOM	864	CG1	ILE A 174	23.397	21.850	12.532	1.00	37.25		A
	ATOM	865	CD1	ILE A 174	23.355	20.620	13.418	1.00	36.85		A
	ATOM	866	C	ILE A 174	22.259	24.492	11.801	1.00	36.71		A
	ATOM	867	O	ILE A 174	21.448	24.556	12.724	1.00	38.05		A
30	ATOM	868	N	GLY A 175	23.185	25.423	11.592	1.00	35.48		A
	ATOM	869	CA	GLY A 175	23.265	26.585	12.462	1.00	35.29		A
	ATOM	870	C	GLY A 175	24.053	26.360	13.737	1.00	35.06		A
	ATOM	871	O	GLY A 175	25.066	27.019	13.970	1.00	37.46		A
	ATOM	872	N	SER A 176	23.581	25.441	14.571	1.00	33.94		A
35	ATOM	873	CA	SER A 176	24.253	25.113	15.822	1.00	32.84		A
	ATOM	874	CB	SER A 176	23.938	26.155	16.901	1.00	33.54		A
	ATOM	875	OG	SER A 176	22.599	26.056	17.347	1.00	34.86		A
	ATOM	876	C	SER A 176	23.796	23.731	16.276	1.00	32.34		A
	ATOM	877	O	SER A 176	22.726	23.263	15.884	1.00	32.82		A
40	ATOM	878	N	PHE A 177	24.609	23.085	17.103	1.00	29.39		A
	ATOM	879	CA	PHE A 177	24.313	21.743	17.597	1.00	27.20		A
	ATOM	880	CB	PHE A 177	25.621	20.989	17.865	1.00	26.39		A
	ATOM	881	CG	PHE A 177	26.372	20.585	16.622	1.00	26.18		A
	ATOM	882	CD1	PHE A 177	26.210	21.277	15.426	1.00	25.30		A
45	ATOM	883	CD2	PHE A 177	27.266	19.516	16.662	1.00	26.05		A
	ATOM	884	CE1	PHE A 177	26.923	20.912	14.290	1.00	26.59		A
	ATOM	885	CE2	PHE A 177	27.986	19.143	15.532	1.00	26.06		A
	ATOM	886	CZ	PHE A 177	27.815	19.841	14.343	1.00	25.42		A
	ATOM	887	C	PHE A 177	23.500	21.752	18.884	1.00	27.00		A
50	ATOM	888	O	PHE A 177	23.704	22.610	19.747	1.00	26.48		A
	ATOM	889	N	ASP A 178	22.578	20.802	19.022	1.00	26.70		A
	ATOM	890	CA	ASP A 178	21.816	20.729	20.260	1.00	26.35		A
	ATOM	891	CB	ASP A 178	20.621	19.773	20.142	1.00	29.90		A
	ATOM	892	CG	ASP A 178	21.020	18.372	19.720	1.00	32.28		A
55	ATOM	893	OD1	ASP A 178	22.157	17.949	20.014	1.00	35.21		A
	ATOM	894	OD2	ASP A 178	20.179	17.683	19.105	1.00	34.79		A
	ATOM	895	C	ASP A 178	22.810	20.228	21.311	1.00	25.03		A
	ATOM	896	O	ASP A 178	23.974	19.968	20.992	1.00	21.24		A
	ATOM	897	N	GLU A 179	22.361	20.083	22.552	1.00	23.60		A

	ATOM	898	CA	GLU A 179	23.247	19.644	23.619	1.00	25.18	A
	ATOM	899	CB	GLU A 179	22.542	19.770	24.971	1.00	27.60	A
	ATOM	900	CG	GLU A 179	23.324	19.176	26.130	1.00	32.58	A
	ATOM	901	CD	GLU A 179	22.997	19.845	27.449	1.00	35.82	A
5	ATOM	902	OE1	GLU A 179	21.825	20.224	27.645	1.00	35.95	A
	ATOM	903	OE2	GLU A 179	23.912	19.984	28.291	1.00	38.19	A
	ATOM	904	C	GLU A 179	23.808	18.235	23.450	1.00	24.08	A
	ATOM	905	O	GLU A 179	24.977	17.989	23.756	1.00	22.79	A
	ATOM	906	N	THR A 180	22.983	17.316	22.961	1.00	23.36	A
10	ATOM	907	CA	THR A 180	23.412	15.935	22.761	1.00	22.15	A
	ATOM	908	CB	THR A 180	22.224	15.054	22.320	1.00	23.77	A
	ATOM	909	OG1	THR A 180	21.222	15.075	23.341	1.00	26.37	A
	ATOM	910	CG2	THR A 180	22.670	13.616	22.088	1.00	22.66	A
	ATOM	911	C	THR A 180	24.533	15.830	21.724	1.00	22.01	A
15	ATOM	912	O	THR A 180	25.533	15.141	21.944	1.00	19.87	A
	ATOM	913	N	CYS A 181	24.365	16.511	20.596	1.00	21.21	A
	ATOM	914	CA	CYS A 181	25.372	16.480	19.541	1.00	22.22	A
	ATOM	915	CB	CYS A 181	24.800	17.065	18.250	1.00	24.62	A
	ATOM	916	SG	CYS A 181	23.435	16.080	17.560	1.00	29.50	A
20	ATOM	917	C	CYS A 181	26.633	17.232	19.954	1.00	23.07	A
	ATOM	918	O	CYS A 181	27.746	16.827	19.608	1.00	23.95	A
	ATOM	919	N	THR A 182	26.463	18.325	20.695	1.00	22.76	A
	ATOM	920	CA	THR A 182	27.606	19.103	21.161	1.00	21.49	A
	ATOM	921	CB	THR A 182	27.167	20.346	21.978	1.00	21.37	A
25	ATOM	922	OG1	THR A 182	26.459	21.262	21.134	1.00	22.50	A
	ATOM	923	CG2	THR A 182	28.379	21.046	22.565	1.00	18.36	A
	ATOM	924	C	THR A 182	28.454	18.215	22.071	1.00	21.48	A
	ATOM	925	O	THR A 182	29.669	18.090	21.894	1.00	19.95	A
	ATOM	926	N	ARG A 183	27.798	17.602	23.050	1.00	18.97	A
30	ATOM	927	CA	ARG A 183	28.468	16.723	23.996	1.00	19.39	A
	ATOM	928	CB	ARG	183	27.455	16.140	24.984	0.50	19.46	AC1
	ATOM	929	CG	ARG	183	28.030	15.062	25.887	0.50	18.77	AC1
	ATOM	930	CD	ARG	183	27.021	14.571	26.925	0.50	21.19	AC1
	ATOM	931	NE	ARG	183	26.605	15.642	27.824	0.50	19.16	AC1
35	ATOM	932	CZ	ARG	183	25.496	16.362	27.679	0.50	20.45	AC1
	ATOM	933	NH1	ARG	183	24.672	16.123	26.666	0.50	19.81	AC1
	ATOM	934	NH2	ARG	183	25.224	17.338	28.539	0.50	17.11	AC1
	ATOM	935	C	ARG A 183	29.206	15.577	23.302	1.00	20.02	A
	ATOM	936	O	ARG A 183	30.383	15.333	23.573	1.00	19.97	A
40	ATOM	937	N	PHE A 184	28.520	14.871	22.409	1.00	19.24	A
	ATOM	938	CA	PHE A 184	29.144	13.746	21.722	1.00	18.04	A
	ATOM	939	CB	PHE A 184	28.158	13.078	20.764	1.00	21.05	A
	ATOM	940	CG	PHE A 184	28.719	11.857	20.098	1.00	22.67	A
	ATOM	941	CD1	PHE A 184	28.717	10.630	20.754	1.00	22.97	A
45	ATOM	942	CD2	PHE A 184	29.317	11.949	18.850	1.00	19.97	A
	ATOM	943	CE1	PHE A 184	29.308	9.510	20.176	1.00	23.53	A
	ATOM	944	CE2	PHE A 184	29.915	10.833	18.263	1.00	24.11	A
	ATOM	945	CZ	PHE A 184	29.910	9.613	18.928	1.00	22.97	A
	ATOM	946	C	PHE A 184	30.403	14.127	20.941	1.00	17.99	A
50	ATOM	947	O	PHE A 184	31.461	13.531	21.130	1.00	18.89	A
	ATOM	948	N	TYR A 185	30.292	15.110	20.056	1.00	15.73	A
	ATOM	949	CA	TYR A 185	31.443	15.519	19.265	1.00	15.72	A
	ATOM	950	CB	TYR A 185	30.992	16.413	18.111	1.00	17.33	A
	ATOM	951	CG	TYR A 185	30.364	15.584	17.015	1.00	19.37	A
55	ATOM	952	CD1	TYR A 185	31.159	14.809	16.168	1.00	16.53	A
	ATOM	953	CE1	TYR A 185	30.590	13.952	15.232	1.00	18.12	A
	ATOM	954	CD2	TYR A 185	28.976	15.484	16.892	1.00	18.18	A
	ATOM	955	CE2	TYR A 185	28.398	14.623	15.956	1.00	18.90	A
	ATOM	956	CZ	TYR A 185	29.211	13.861	15.133	1.00	18.41	A

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      ATOM    957  OH  TYR A 185      28.650  12.995  14.218  1.00 20.48      A
      ATOM    958  C   TYR A 185      32.544  16.172  20.083  1.00 15.79      A
      ATOM    959  O   TYR A 185      33.720  16.015  19.766  1.00 17.69      A
      ATOM    960  N   THR A 186      32.176  16.887  21.142  1.00 15.68      A
   5  ATOM    961  CA  THR A 186      33.184  17.504  21.997  1.00 16.03      A
      ATOM    962  CB  THR A 186      32.559  18.403  23.094  1.00 16.62      A
      ATOM    963  OG1 THR A 186      31.866  19.503  22.481  1.00 14.79      A
      ATOM    964  CG2 THR A 186      33.656  18.953  24.019  1.00 14.68      A
      ATOM    965  C   THR A 186      33.954  16.375  22.680  1.00 15.59      A
  10  ATOM    966  O   THR A 186      35.176  16.443  22.823  1.00 13.77      A
      ATOM    967  N   ALA A 187      33.234  15.333  23.097  1.00 14.06      A
      ATOM    968  CA  ALA A 187      33.869  14.196  23.757  1.00 14.74      A
      ATOM    969  CB  ALA A 187      32.810  13.195  24.224  1.00 14.32      A
      ATOM    970  C   ALA A 187      34.875  13.509  22.821  1.00 14.41      A
  15  ATOM    971  O   ALA A 187      35.972  13.136  23.247  1.00 15.61      A
      ATOM    972  N   GLU A 188      34.516  13.340  21.549  1.00 14.01      A
      ATOM    973  CA  GLU A 188      35.443  12.704  20.615  1.00 13.50      A
      ATOM    974  CB  GLU A 188      34.782  12.449  19.251  1.00 12.85      A
      ATOM    975  CG  GLU A 188      33.622  11.454  19.282  1.00 12.71      A
  20  ATOM    976  CD  GLU A 188      33.464  10.685  17.979  1.00 15.01      A
      ATOM    977  OE1 GLU A 188      33.687  11.275  16.899  1.00 13.21      A
      ATOM    978  OE2 GLU A 188      33.110   9.484  18.031  1.00 17.69      A
      ATOM    979  C   GLU A 188      36.682  13.582  20.436  1.00 13.34      A
      ATOM    980  O   GLU A 188      37.803  13.085  20.408  1.00 14.69      A
  25  ATOM    981  N   ILE A 189      36.486  14.893  20.326  1.00 13.52      A
      ATOM    982  CA  ILE A 189      37.627  15.787  20.159  1.00 13.35      A
      ATOM    983  CB  ILE A 189      37.169  17.247  19.939  1.00 13.95      A
      ATOM    984  CG2 ILE A 189      38.381  18.165  19.822  1.00 12.47      A
      ATOM    985  CG1 ILE A 189      36.302  17.332  18.671  1.00 13.44      A
  30  ATOM    986  CD1 ILE A 189      35.588  18.664  18.491  1.00 14.29      A
      ATOM    987  C   ILE A 189      38.530  15.702  21.394  1.00 14.63      A
      ATOM    988  O   ILE A 189      39.753  15.595  21.271  1.00 12.97      A
      ATOM    989  N   VAL A 190      37.927  15.751  22.582  1.00 14.35      A
      ATOM    990  CA  VAL A 190      38.684  15.655  23.832  1.00 13.22      A
  35  ATOM    991  CB  VAL A 190      37.743  15.690  25.061  1.00 14.28      A
      ATOM    992  CG1 VAL A 190      38.509  15.267  26.326  1.00 15.08      A
      ATOM    993  CG2 VAL A 190      37.160  17.082  25.233  1.00 12.08      A
      ATOM    994  C   VAL A 190      39.468  14.338  23.859  1.00 14.61      A
      ATOM    995  O   VAL A 190      40.634  14.304  24.250  1.00 13.72      A
  40  ATOM    996  N   SER A 191      38.825  13.254  23.432  1.00 15.26      A
      ATOM    997  CA  SER A 191      39.478  11.943  23.421  1.00 16.81      A
      ATOM    998  CB  SER   191      38.470  10.857  23.041  0.50 16.14      AC1
      ATOM    999  OG  SER   191      39.018   9.569  23.238  0.50 16.94      AC1
      ATOM   1000  C   SER A 191      40.649  11.928  22.441  1.00 16.58      A
  45  ATOM   1001  O   SER A 191      41.697  11.335  22.713  1.00 13.96      A
      ATOM   1002  N   ALA A 192      40.468  12.586  21.300  1.00 15.26      A
      ATOM   1003  CA  ALA A 192      41.518  12.645  20.292  1.00 14.37      A
      ATOM   1004  CB  ALA A 192      40.989  13.296  19.016  1.00 14.43      A
      ATOM   1005  C   ALA A 192      42.695  13.440  20.845  1.00 16.46      A
  50  ATOM   1006  O   ALA A 192      43.851  13.038  20.697  1.00 17.96      A
      ATOM   1007  N   LEU A 193      42.401  14.563  21.496  1.00 15.02      A
      ATOM   1008  CA  LEU A 193      43.459  15.392  22.067  1.00 15.42      A
      ATOM   1009  CB  LEU A 193      42.884  16.712  22.600  1.00 12.88      A
      ATOM   1010  CG  LEU A 193      42.445  17.721  21.525  1.00 15.97      A
  55  ATOM   1011  CD1 LEU A 193      41.869  18.979  22.190  1.00 13.97      A
      ATOM   1012  CD2 LEU A 193      43.642  18.088  20.655  1.00 14.58      A
      ATOM   1013  C   LEU A 193      44.211  14.659  23.174  1.00 14.49      A
      ATOM   1014  O   LEU A 193      45.427  14.813  23.310  1.00 16.56      A
      ATOM   1015  N   GLU A 194      43.500  13.870  23.975  1.00 13.96      A
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      ATOM   1016   CA   GLU A 194    44.179  13.123  25.032  1.00 14.08      A
      ATOM   1017   CB   GLU A 194    43.190  12.295  25.857  1.00 14.65      A
      ATOM   1018   CG   GLU A 194    43.882  11.301  26.789  1.00 17.09      A
      ATOM   1019   CD   GLU A 194    42.924  10.592  27.730  1.00 19.59      A
   5  ATOM   1020   OE1  GLU A 194    41.809  10.237  27.295  1.00 19.25      A
      ATOM   1021   OE2  GLU A 194    43.302  10.380  28.906  1.00 20.20      A
      ATOM   1022   C    GLU A 194    45.208  12.199  24.386  1.00 13.57      A
      ATOM   1023   O    GLU A 194    46.337  12.093  24.847  1.00 14.23      A
      ATOM   1024   N    TYR A 195    44.822  11.544  23.301  1.00 14.89      A
  10  ATOM   1025   CA   TYR A 195    45.743  10.642  22.618  1.00 16.58      A
      ATOM   1026   CB   TYR A 195    45.030   9.910  21.488  1.00 17.29      A
      ATOM   1027   CG   TYR A 195    45.956   9.058  20.649  1.00 17.92      A
      ATOM   1028   CD1  TYR A 195    46.347   7.788  21.077  1.00 17.96      A
      ATOM   1029   CE1  TYR A 195    47.203   6.996  20.304  1.00 19.77      A
  15  ATOM   1030   CD2  TYR A 195    46.445   9.524  19.428  1.00 16.67      A
      ATOM   1031   CE2  TYR A 195    47.299   8.744  18.650  1.00 18.51      A
      ATOM   1032   CZ   TYR A 195    47.671   7.481  19.094  1.00 20.24      A
      ATOM   1033   OH   TYR A 195    48.506   6.705  18.325  1.00 21.89      A
      ATOM   1034   C    TYR A 195    46.917  11.419  22.035  1.00 16.98      A
  20  ATOM   1035   O    TYR A 195    48.081  11.047  22.203  1.00 14.61      A
      ATOM   1036   N    LEU A 196    46.599  12.507  21.347  1.00 16.30      A
      ATOM   1037   CA   LEU A 196    47.619  13.328  20.720  1.00 18.15      A
      ATOM   1038   CB   LEU A 196    46.969  14.502  19.982  1.00 18.59      A
      ATOM   1039   CG   LEU A 196    47.834  15.203  18.935  1.00 22.51      A
  25  ATOM   1040   CD1  LEU A 196    48.222  14.206  17.841  1.00 20.94      A
      ATOM   1041   CD2  LEU A 196    47.060  16.375  18.338  1.00 22.98      A
      ATOM   1042   C    LEU A 196    48.592  13.844  21.763  1.00 17.75      A
      ATOM   1043   O    LEU A 196    49.801  13.644  21.649  1.00 18.33      A
      ATOM   1044   N    HIS A 197    48.064  14.495  22.792  1.00 17.12      A
  30  ATOM   1045   CA   HIS A 197    48.913  15.042  23.842  1.00 18.47      A
      ATOM   1046   CB   HIS A 197    48.069  15.866  24.817  1.00 15.90      A
      ATOM   1047   CG   HIS A 197    47.571  17.152  24.231  1.00 19.15      A
      ATOM   1048   CD2  HIS A 197    47.830  17.745  23.038  1.00 18.22      A
      ATOM   1049   ND1  HIS A 197    46.704  17.992  24.897  1.00 17.47      A
  35  ATOM   1050   CE1  HIS A 197    46.450  19.047  24.139  1.00 19.74      A
      ATOM   1051   NE2  HIS A 197    47.119  18.921  23.007  1.00 15.69      A
      ATOM   1052   C    HIS A 197    49.696  13.958  24.572  1.00 19.40      A
      ATOM   1053   O    HIS A 197    50.823  14.192  25.021  1.00 19.42      A
      ATOM   1054   N    GLY A 198    49.106  12.770  24.679  1.00 18.59      A
  40  ATOM   1055   CA   GLY A 198    49.793  11.675  25.339  1.00 19.60      A
      ATOM   1056   C    GLY A 198    51.075  11.307  24.612  1.00 21.86      A
      ATOM   1057   O    GLY A 198    51.963  10.682  25.186  1.00 23.09      A
      ATOM   1058   N    LYS A 199    51.174  11.687  23.341  1.00 22.81      A
      ATOM   1059   CA   LYS A 199    52.368  11.401  22.549  1.00 24.43      A
  45  ATOM   1060   CB   LYS A 199    51.990  10.905  21.154  1.00 26.00      A
      ATOM   1061   CG   LYS A 199    51.378   9.520  21.133  1.00 30.98      A
      ATOM   1062   CD   LYS A 199    51.291   9.002  19.708  1.00 36.85      A
      ATOM   1063   CE   LYS A 199    50.832   7.559  19.682  1.00 40.37      A
      ATOM   1064   NZ   LYS A 199    51.646   6.691  20.581  1.00 43.48      A
  50  ATOM   1065   C    LYS A 199    53.253  12.631  22.414  1.00 23.88      A
      ATOM   1066   O    LYS A 199    54.144  12.669  21.568  1.00 24.97      A
      ATOM   1067   N    GLY A 200    52.997  13.638  23.243  1.00 24.00      A
      ATOM   1068   CA   GLY A 200    53.790  14.853  23.203  1.00 22.12      A
      ATOM   1069   C    GLY A 200    53.665  15.632  21.907  1.00 22.14      A
  55  ATOM   1070   O    GLY A 200    54.632  16.231  21.439  1.00 22.41      A
      ATOM   1071   N    ILE A 201    52.475  15.630  21.320  1.00 20.00      A
      ATOM   1072   CA   ILE A 201    52.252  16.355  20.080  1.00 18.93      A
      ATOM   1073   CB   ILE A 201    51.784  15.414  18.955  1.00 19.70      A
      ATOM   1074   CG2  ILE A 201    51.414  16.226  17.716  1.00 20.12      A
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	ATOM	1075	CG1	ILE A 201	52.880	14.395	18.636	1.00	20.03	A
	ATOM	1076	CD1	ILE A 201	52.408	13.258	17.745	1.00	22.75	A
	ATOM	1077	C	ILE A 201	51.193	17.425	20.270	1.00	19.87	A
	ATOM	1078	O	ILE A 201	50.121	17.161	20.817	1.00	20.08	A
5	ATOM	1079	N	ILE A 202	51.508	18.633	19.815	1.00	19.94	A
	ATOM	1080	CA	ILE A 202	50.601	19.772	19.891	1.00	20.45	A
	ATOM	1081	CB	ILE A 202	51.352	21.040	20.356	1.00	22.21	A
	ATOM	1082	CG2	ILE A 202	50.381	22.220	20.470	1.00	22.67	A
	ATOM	1083	CG1	ILE A 202	52.033	20.775	21.700	1.00	24.19	A
10	ATOM	1084	CD1	ILE A 202	52.914	21.920	22.169	1.00	25.39	A
	ATOM	1085	C	ILE A 202	50.105	19.999	18.464	1.00	20.71	A
	ATOM	1086	O	ILE A 202	50.910	20.067	17.538	1.00	19.48	A
	ATOM	1087	N	HIS A 203	48.795	20.108	18.270	1.00	18.65	A
	ATOM	1088	CA	HIS A 203	48.280	20.319	16.919	1.00	18.02	A
15	ATOM	1089	CB	HIS A 203	46.775	20.057	16.874	1.00	16.31	A
	ATOM	1090	CG	HIS A 203	46.199	20.136	15.495	1.00	18.36	A
	ATOM	1091	CD2	HIS A 203	46.043	21.186	14.655	1.00	16.42	A
	ATOM	1092	ND1	HIS A 203	45.759	19.026	14.806	1.00	19.50	A
	ATOM	1093	CE1	HIS A 203	45.359	19.389	13.600	1.00	17.64	A
20	ATOM	1094	NE2	HIS A 203	45.522	20.694	13.483	1.00	20.87	A
	ATOM	1095	C	HIS A 203	48.589	21.738	16.405	1.00	18.92	A
	ATOM	1096	O	HIS A 203	49.073	21.906	15.282	1.00	16.21	A
	ATOM	1097	N	ARG A 204	48.301	22.744	17.232	1.00	18.60	A
	ATOM	1098	CA	ARG A 204	48.552	24.157	16.914	1.00	19.81	A
25	ATOM	1099	CB	ARG A 204	49.998	24.365	16.458	1.00	21.61	A
	ATOM	1100	CG	ARG A 204	51.024	24.137	17.550	1.00	23.82	A
	ATOM	1101	CD	ARG A 204	52.323	24.870	17.252	1.00	27.62	A
	ATOM	1102	NE	ARG A 204	52.932	24.449	15.994	1.00	29.43	A
	ATOM	1103	CZ	ARG A 204	54.125	24.861	15.572	1.00	33.10	A
30	ATOM	1104	NH1	ARG A 204	54.835	25.706	16.311	1.00	32.12	A
	ATOM	1105	NH2	ARG A 204	54.614	24.426	14.418	1.00	30.25	A
	ATOM	1106	C	ARG A 204	47.624	24.830	15.905	1.00	20.03	A
	ATOM	1107	O	ARG A 204	47.711	26.038	15.698	1.00	20.88	A
	ATOM	1108	N	ASP A 205	46.755	24.071	15.255	1.00	18.96	A
35	ATOM	1109	CA	ASP A 205	45.828	24.692	14.325	1.00	17.90	A
	ATOM	1110	CB	ASP A 205	46.418	24.741	12.914	1.00	18.95	A
	ATOM	1111	CG	ASP A 205	45.655	25.688	12.008	1.00	20.36	A
	ATOM	1112	OD1	ASP A 205	44.939	26.560	12.545	1.00	20.35	A
	ATOM	1113	OD2	ASP A 205	45.772	25.573	10.771	1.00	22.49	A
40	ATOM	1114	C	ASP A 205	44.500	23.956	14.328	1.00	19.60	A
	ATOM	1115	O	ASP A 205	43.876	23.751	13.287	1.00	21.53	A
	ATOM	1116	N	LEU A 206	44.063	23.569	15.521	1.00	18.53	A
	ATOM	1117	CA	LEU A 206	42.813	22.851	15.667	1.00	19.18	A
	ATOM	1118	CB	LEU A 206	42.693	22.295	17.087	1.00	18.94	A
45	ATOM	1119	CG	LEU A 206	41.511	21.358	17.346	1.00	23.10	A
	ATOM	1120	CD1	LEU A 206	41.615	20.142	16.436	1.00	23.01	A
	ATOM	1121	CD2	LEU A 206	41.504	20.933	18.808	1.00	22.97	A
	ATOM	1122	C	LEU A 206	41.639	23.772	15.361	1.00	19.05	A
	ATOM	1123	O	LEU A 206	41.556	24.880	15.886	1.00	19.25	A
50	ATOM	1124	N	LYS A 207	40.740	23.307	14.500	1.00	17.54	A
	ATOM	1125	CA	LYS A 207	39.564	24.081	14.110	1.00	18.60	A
	ATOM	1126	CB	LYS A 207	39.980	25.248	13.196	1.00	18.98	A
	ATOM	1127	CG	LYS A 207	40.786	24.817	11.982	1.00	18.20	A
	ATOM	1128	CD	LYS A 207	41.246	26.000	11.139	1.00	21.42	A
55	ATOM	1129	CE	LYS A 207	42.223	25.537	10.062	1.00	23.21	A
	ATOM	1130	NZ	LYS A 207	42.561	26.604	9.084	1.00	29.61	A
	ATOM	1131	C	LYS A 207	38.566	23.181	13.388	1.00	18.18	A
	ATOM	1132	O	LYS A 207	38.921	22.100	12.915	1.00	18.11	A
	ATOM	1133	N	PRO A 208	37.298	23.614	13.293	1.00	20.26	A

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      ATOM   1134   CD    PRO A 208      36.713  24.833  13.882  1.00 18.79      A
      ATOM   1135   CA    PRO A 208      36.272  22.814  12.616  1.00 19.67      A
      ATOM   1136   CB    PRO A 208      35.063  23.742  12.608  1.00 19.45      A
      ATOM   1137   CG    PRO A 208      35.231  24.509  13.891  1.00 21.81      A
  5   ATOM   1138   C     PRO A 208      36.674  22.372  11.209  1.00 21.04      A
      ATOM   1139   O     PRO A 208      36.264  21.307  10.751  1.00 21.19      A
      ATOM   1140   N     GLU A 209      37.474  23.188  10.528  1.00 21.69      A
      ATOM   1141   CA    GLU A 209      37.928  22.872   9.170  1.00 22.64      A
      ATOM   1142   CB    GLU   209      38.644  24.084   8.558  0.50 23.65      AC1
 10   ATOM   1143   CG    GLU   209      39.253  23.825   7.185  0.50 27.24      AC1
      ATOM   1144   CD    GLU   209      40.155  24.958   6.716  0.50 29.40      AC1
      ATOM   1145   OE1   GLU   209      39.660  26.094   6.553  0.50 29.68      AC1
      ATOM   1146   OE2   GLU   209      41.363  24.711   6.511  0.50 30.07      AC1
      ATOM   1147   C     GLU A 209      38.879  21.668   9.159  1.00 22.28      A
 15   ATOM   1148   O     GLU A 209      38.955  20.933   8.170  1.00 21.36      A
      ATOM   1149   N     ASN A 210      39.600  21.490  10.263  1.00 19.90      A
      ATOM   1150   CA    ASN A 210      40.574  20.412  10.436  1.00 19.44      A
      ATOM   1151   CB    ASN A 210      41.744  20.912  11.287  1.00 20.07      A
      ATOM   1152   CG    ASN A 210      42.746  21.698  10.479  1.00 25.77      A
 20   ATOM   1153   OD1   ASN A 210      43.571  22.427  11.029  1.00 26.73      A
      ATOM   1154   ND2   ASN A 210      42.687  21.548   9.158  1.00 25.15      A
      ATOM   1155   C     ASN A 210      40.005  19.151  11.078  1.00 18.63      A
      ATOM   1156   O     ASN A 210      40.712  18.154  11.234  1.00 18.29      A
      ATOM   1157   N     ILE A 211      38.739  19.202  11.469  1.00 16.31      A
 25   ATOM   1158   CA    ILE A 211      38.090  18.058  12.085  1.00 15.49      A
      ATOM   1159   CB    ILE A 211      37.336  18.488  13.354  1.00 15.40      A
      ATOM   1160   CG2   ILE A 211      36.582  17.311  13.950  1.00 14.59      A
      ATOM   1161   CG1   ILE A 211      38.342  19.046  14.365  1.00 15.91      A
      ATOM   1162   CD1   ILE A 211      37.720  19.669  15.590  1.00 15.98      A
 30   ATOM   1163   C     ILE A 211      37.131  17.485  11.059  1.00 17.26      A
      ATOM   1164   O     ILE A 211      35.995  17.947  10.926  1.00 18.16      A
      ATOM   1165   N     LEU A 212      37.599  16.486  10.317  1.00 15.97      A
      ATOM   1166   CA    LEU A 212      36.784  15.875   9.274  1.00 17.08      A
      ATOM   1167   CB    LEU A 212      37.685  15.249   8.202  1.00 17.78      A
 35   ATOM   1168   CG    LEU A 212      38.785  16.157   7.640  1.00 18.92      A
      ATOM   1169   CD1   LEU A 212      39.476  15.450   6.485  1.00 22.09      A
      ATOM   1170   CD2   LEU A 212      38.188  17.482   7.166  1.00 19.91      A
      ATOM   1171   C     LEU A 212      35.843  14.825   9.837  1.00 18.35      A
      ATOM   1172   O     LEU A 212      35.957  14.433  11.002  1.00 19.39      A
 40   ATOM   1173   N     LEU A 213      34.915  14.368   9.000  1.00 17.84      A
      ATOM   1174   CA    LEU A 213      33.942  13.362   9.403  1.00 19.94      A
      ATOM   1175   CB    LEU A 213      32.556  14.004   9.487  1.00 20.84      A
      ATOM   1176   CG    LEU A 213      32.396  15.059  10.583  1.00 20.31      A
      ATOM   1177   CD1   LEU A 213      31.124  15.837  10.367  1.00 22.75      A
 45   ATOM   1178   CD2   LEU A 213      32.379  14.378  11.940  1.00 23.93      A
      ATOM   1179   C     LEU A 213      33.914  12.187   8.426  1.00 20.98      A
      ATOM   1180   O     LEU A 213      33.743  12.379   7.218  1.00 19.55      A
      ATOM   1181   N     ASN A 214      34.088  10.970   8.935  1.00 20.44      A
      ATOM   1182   CA    ASN A 214      34.055   9.814   8.049  1.00 23.77      A
 50   ATOM   1183   CB    ASN A 214      34.745   8.596   8.674  1.00 25.30      A
      ATOM   1184   CG    ASN A 214      34.077   8.127   9.948  1.00 32.04      A
      ATOM   1185   OD1   ASN A 214      32.908   8.422  10.206  1.00 34.43      A
      ATOM   1186   ND2   ASN A 214      34.818   7.369  10.752  1.00 33.85      A
      ATOM   1187   C     ASN A 214      32.618   9.466   7.693  1.00 24.07      A
 55   ATOM   1188   O     ASN A 214      31.672  10.113   8.150  1.00 19.94      A
      ATOM   1189   N     GLU A 215      32.459   8.433   6.879  1.00 25.77      A
      ATOM   1190   CA    GLU A 215      31.138   8.003   6.445  1.00 28.69      A
      ATOM   1191   CB    GLU A 215      31.275   6.796   5.513  1.00 31.98      A
      ATOM   1192   CG    GLU A 215      29.970   6.334   4.896  1.00 40.22      A
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	ATOM	1193	CD	GLU A 215	30.182	5.312	3.795	1.00 44.27	A
	ATOM	1194	OE1	GLU A 215	30.817	4.268	4.065	1.00 46.46	A
	ATOM	1195	OE2	GLU A 215	29.716	5.556	2.660	1.00 46.13	A
	ATOM	1196	C	GLU A 215	30.188	7.673	7.601	1.00 28.41	A
5	ATOM	1197	O	GLU A 215	28.971	7.769	7.447	1.00 28.52	A
	ATOM	1198	N	ASP A 216	30.737	7.287	8.752	1.00 26.77	A
	ATOM	1199	CA	ASP A 216	29.914	6.953	9.917	1.00 27.28	A
	ATOM	1200	CB	ASP A 216	30.538	5.795	10.696	1.00 31.27	A
	ATOM	1201	CG	ASP A 216	30.390	4.466	9.979	1.00 37.61	A
10	ATOM	1202	OD1	ASP A 216	29.274	4.170	9.499	1.00 39.45	A
	ATOM	1203	OD2	ASP A 216	31.382	3.710	9.902	1.00 41.84	A
	ATOM	1204	C	ASP A 216	29.697	8.135	10.862	1.00 26.37	A
	ATOM	1205	O	ASP A 216	29.136	7.984	11.950	1.00 25.73	A
	ATOM	1206	N	MET A 217	30.156	9.306	10.441	1.00 23.02	A
15	ATOM	1207	CA	MET A 217	30.015	10.527	11.218	1.00 21.83	A
	ATOM	1208	CB	MET A 217	28.537	10.789	11.517	1.00 23.24	A
	ATOM	1209	CG	MET A 217	27.742	11.186	10.274	1.00 22.98	A
	ATOM	1210	SD	MET A 217	28.464	12.616	9.430	1.00 27.57	A
	ATOM	1211	CE	MET A 217	27.679	13.974	10.332	1.00 26.68	A
20	ATOM	1212	C	MET A 217	30.844	10.618	12.502	1.00 21.51	A
	ATOM	1213	O	MET A 217	30.474	11.323	13.440	1.00 18.62	A
	ATOM	1214	N	HIS A 218	31.957	9.892	12.544	1.00 20.10	A
	ATOM	1215	CA	HIS A 218	32.873	9.964	13.678	1.00 19.86	A
	ATOM	1216	CB	HIS A 218	33.482	8.594	13.977	1.00 20.21	A
25	ATOM	1217	CG	HIS A 218	32.551	7.667	14.698	1.00 22.40	A
	ATOM	1218	CD2	HIS A 218	31.910	6.547	14.287	1.00 21.27	A
	ATOM	1219	ND1	HIS A 218	32.177	7.863	16.011	1.00 19.59	A
	ATOM	1220	CE1	HIS A 218	31.348	6.902	16.379	1.00 21.88	A
	ATOM	1221	NE2	HIS A 218	31.168	6.091	15.351	1.00 22.08	A
30	ATOM	1222	C	HIS A 218	33.947	10.921	13.172	1.00 19.10	A
	ATOM	1223	O	HIS A 218	34.170	11.004	11.965	1.00 20.31	A
	ATOM	1224	N	ILE A 219	34.611	11.638	14.067	1.00 17.21	A
	ATOM	1225	CA	ILE A 219	35.628	12.586	13.618	1.00 15.26	A
	ATOM	1226	CB	ILE A 219	35.987	13.614	14.716	1.00 15.38	A
35	ATOM	1227	CG2	ILE A 219	34.722	14.305	15.221	1.00 14.58	A
	ATOM	1228	CG1	ILE A 219	36.734	12.919	15.864	1.00 14.46	A
	ATOM	1229	CD1	ILE A 219	37.279	13.885	16.911	1.00 13.74	A
	ATOM	1230	C	ILE A 219	36.929	11.944	13.161	1.00 16.21	A
	ATOM	1231	O	ILE A 219	37.238	10.799	13.500	1.00 15.88	A
40	ATOM	1232	N	GLN A 220	37.677	12.711	12.378	1.00 15.62	A
	ATOM	1233	CA	GLN A 220	38.980	12.316	11.876	1.00 17.84	A
	ATOM	1234	CB	GLN A 220	38.872	11.595	10.525	1.00 20.00	A
	ATOM	1235	CG	GLN A 220	38.463	10.129	10.659	1.00 26.97	A
	ATOM	1236	CD	GLN A 220	38.648	9.343	9.372	1.00 29.95	A
45	ATOM	1237	OE1	GLN A 220	37.968	9.590	8.373	1.00 33.12	A
	ATOM	1238	NE2	GLN A 220	39.578	8.393	9.389	1.00 30.47	A
	ATOM	1239	C	GLN A 220	39.757	13.610	11.735	1.00 17.00	A
	ATOM	1240	O	GLN A 220	39.609	14.339	10.751	1.00 18.27	A
	ATOM	1241	N	ILE A 221	40.566	13.906	12.746	1.00 14.34	A
50	ATOM	1242	CA	ILE A 221	41.361	15.120	12.753	1.00 14.46	A
	ATOM	1243	CB	ILE A 221	41.867	15.416	14.175	1.00 12.30	A
	ATOM	1244	CG2	ILE A 221	42.764	16.656	14.167	1.00 14.78	A
	ATOM	1245	CG1	ILE A 221	40.660	15.613	15.102	1.00 13.92	A
	ATOM	1246	CD1	ILE A 221	41.003	15.901	16.543	1.00 15.06	A
55	ATOM	1247	C	ILE A 221	42.536	14.996	11.783	1.00 15.44	A
	ATOM	1248	O	ILE A 221	43.106	13.915	11.613	1.00 13.93	A
	ATOM	1249	N	THR A 222	42.877	16.101	11.127	1.00 15.36	A
	ATOM	1250	CA	THR A 222	43.980	16.098	10.174	1.00 17.52	A
	ATOM	1251	CB	THR A 222	43.470	15.836	8.750	1.00 19.92	A

	ATOM	1252	OG1	THR A 222	44.587	15.637	7.875	1.00	18.78	A
	ATOM	1253	CG2	THR A 222	42.630	17.018	8.257	1.00	18.16	A
	ATOM	1254	C	THR A 222	44.735	17.428	10.192	1.00	19.60	A
	ATOM	1255	O	THR A 222	44.509	18.257	11.084	1.00	18.59	A
5	ATOM	1256	N	ASP A 223	45.630	17.610	9.216	1.00	18.69	A
	ATOM	1257	CA	ASP A 223	46.440	18.825	9.069	1.00	20.12	A
	ATOM	1258	CB	ASP A 223	45.532	20.065	9.108	1.00	23.51	A
	ATOM	1259	CG	ASP A 223	46.248	21.335	8.670	1.00	27.09	A
	ATOM	1260	OD1	ASP A 223	47.283	21.227	7.975	1.00	26.28	A
10	ATOM	1261	OD2	ASP A 223	45.765	22.438	9.009	1.00	26.15	A
	ATOM	1262	C	ASP A 223	47.516	18.913	10.150	1.00	21.73	A
	ATOM	1263	O	ASP A 223	47.439	19.751	11.055	1.00	22.76	A
	ATOM	1264	N	PHE A 224	48.535	18.063	10.027	1.00	20.75	A
	ATOM	1265	CA	PHE A 224	49.611	17.988	11.009	1.00	20.11	A
15	ATOM	1266	CB	PHE A 224	49.805	16.527	11.424	1.00	20.62	A
	ATOM	1267	CG	PHE A 224	48.682	15.991	12.263	1.00	21.41	A
	ATOM	1268	CD1	PHE A 224	48.598	16.312	13.614	1.00	23.05	A
	ATOM	1269	CD2	PHE A 224	47.681	15.212	11.693	1.00	22.27	A
	ATOM	1270	CE1	PHE A 224	47.528	15.868	14.389	1.00	23.30	A
20	ATOM	1271	CE2	PHE A 224	46.606	14.763	12.457	1.00	21.11	A
	ATOM	1272	CZ	PHE A 224	46.530	15.093	13.807	1.00	22.02	A
	ATOM	1273	C	PHE A 224	50.957	18.583	10.619	1.00	20.45	A
	ATOM	1274	O	PHE A 224	51.905	18.547	11.407	1.00	20.73	A
	ATOM	1275	N	GLY A 225	51.049	19.125	9.412	1.00	22.02	A
25	ATOM	1276	CA	GLY A 225	52.301	19.713	8.981	1.00	22.66	A
	ATOM	1277	C	GLY A 225	52.742	20.822	9.920	1.00	24.99	A
	ATOM	1278	O	GLY A 225	53.939	21.041	10.122	1.00	24.52	A
	ATOM	1279	N	THR A 226	51.779	21.524	10.508	1.00	23.50	A
	ATOM	1280	CA	THR A 226	52.106	22.613	11.416	1.00	25.16	A
30	ATOM	1281	CB	THR A 226	51.199	23.829	11.160	1.00	24.76	A
	ATOM	1282	OG1	THR A 226	49.831	23.410	11.113	1.00	22.68	A
	ATOM	1283	CG2	THR A 226	51.571	24.490	9.834	1.00	25.00	A
	ATOM	1284	C	THR A 226	52.046	22.233	12.894	1.00	25.79	A
	ATOM	1285	O	THR A 226	52.019	23.100	13.768	1.00	24.54	A
35	ATOM	1286	N	ALA A 227	52.037	20.935	13.173	1.00	24.97	A
	ATOM	1287	CA	ALA A 227	52.004	20.475	14.550	1.00	25.49	A
	ATOM	1288	CB	ALA A 227	51.659	18.993	14.607	1.00	22.85	A
	ATOM	1289	C	ALA A 227	53.384	20.715	15.149	1.00	27.70	A
	ATOM	1290	O	ALA A 227	54.331	21.047	14.435	1.00	26.60	A
40	ATOM	1291	N	LYS A 228	53.491	20.558	16.461	1.00	28.53	A
	ATOM	1292	CA	LYS A 228	54.760	20.745	17.149	1.00	32.12	A
	ATOM	1293	CB	LYS A 228	54.699	21.974	18.054	1.00	33.81	A
	ATOM	1294	CG	LYS A 228	56.007	22.294	18.765	1.00	41.23	A
	ATOM	1295	CD	LYS A 228	57.082	22.725	17.768	1.00	47.57	A
45	ATOM	1296	CE	LYS A 228	58.401	23.056	18.462	1.00	49.82	A
	ATOM	1297	NZ	LYS A 228	59.459	23.425	17.480	1.00	51.49	A
	ATOM	1298	C	LYS A 228	55.019	19.504	17.985	1.00	33.25	A
	ATOM	1299	O	LYS A 228	54.190	19.129	18.815	1.00	33.70	A
	ATOM	1300	N	VAL A 229	56.159	18.860	17.756	1.00	33.64	A
50	ATOM	1301	CA	VAL A 229	56.516	17.661	18.501	1.00	34.66	A
	ATOM	1302	CB	VAL A 229	57.248	16.646	17.609	1.00	33.50	A
	ATOM	1303	CG1	VAL A 229	57.619	15.419	18.415	1.00	32.34	A
	ATOM	1304	CG2	VAL A 229	56.370	16.264	16.436	1.00	34.25	A
	ATOM	1305	C	VAL A 229	57.420	18.035	19.668	1.00	37.57	A
55	ATOM	1306	O	VAL A 229	58.581	18.392	19.474	1.00	35.91	A
	ATOM	1307	N	LEU A 230	56.877	17.948	20.878	1.00	40.57	A
	ATOM	1308	CA	LEU A 230	57.615	18.289	22.088	1.00	46.10	A
	ATOM	1309	CB	LEU A 230	56.654	18.417	23.270	1.00	44.71	A
	ATOM	1310	CG	LEU A 230	55.627	19.545	23.207	1.00	44.50	A

ATOM	1311	CD1	LEU	A 230	54.673	19.430	24.383	1.00	44.39	A
ATOM	1312	CD2	LEU	A 230	56.340	20.885	23.214	1.00	44.81	A
ATOM	1313	C	LEU	A 230	58.695	17.279	22.440	1.00	50.42	A
ATOM	1314	O	LEU	A 230	58.603	16.104	22.089	1.00	51.64	A
ATOM	1315	N	SER	A 231	59.717	17.756	23.145	1.00	55.81	A
ATOM	1316	CA	SER	A 231	60.824	16.914	23.583	1.00	61.14	A
ATOM	1317	CB	SER	A 231	62.077	17.200	22.750	1.00	61.27	A
ATOM	1318	OG	SER	A 231	62.444	18.568	22.823	1.00	62.85	A
ATOM	1319	C	SER	A 231	61.124	17.126	25.071	1.00	64.65	A
ATOM	1320	O	SER	A 231	61.392	16.164	25.794	1.00	65.70	A
ATOM	1321	N	PRO	A 232	61.081	18.387	25.549	1.00	67.54	A
ATOM	1322	CD	PRO	A 232	60.854	19.651	24.823	1.00	68.60	A
ATOM	1323	CA	PRO	A 232	61.358	18.655	26.966	1.00	68.74	A
ATOM	1324	CB	PRO	A 232	61.109	20.158	27.086	1.00	68.83	A
ATOM	1325	CG	PRO	A 232	61.505	20.666	25.737	1.00	68.96	A
ATOM	1326	C	PRO	A 232	60.460	17.846	27.899	1.00	69.17	A
ATOM	1327	O	PRO	A 232	59.335	17.494	27.541	1.00	69.94	A
ATOM	1328	N	ALA	A 237	57.424	23.198	27.637	1.00	80.06	A
ATOM	1329	CA	ALA	A 237	56.783	23.047	26.335	1.00	79.29	A
ATOM	1330	CB	ALA	A 237	55.275	22.907	26.512	1.00	78.64	A
ATOM	1331	C	ALA	A 237	57.092	24.239	25.433	1.00	79.07	A
ATOM	1332	O	ALA	A 237	56.250	25.113	25.249	1.00	79.47	A
ATOM	1333	N	ALA	A 238	58.297	24.280	24.871	1.00	78.57	A
ATOM	1334	CA	ALA	A 238	58.683	25.383	23.992	1.00	78.50	A
ATOM	1335	CB	ALA	A 238	60.186	25.347	23.728	1.00	78.50	A
ATOM	1336	C	ALA	A 238	57.920	25.327	22.673	1.00	78.15	A
ATOM	1337	O	ALA	A 238	57.243	24.341	22.375	1.00	77.96	A
ATOM	1338	N	ALA	A 239	58.027	26.393	21.887	1.00	77.28	A
ATOM	1339	CA	ALA	A 239	57.338	26.452	20.603	1.00	76.27	A
ATOM	1340	CB	ALA	A 239	55.884	26.489	20.827	1.00	76.61	A
ATOM	1341	C	ALA	A 239	57.766	27.667	19.793	1.00	75.38	A
ATOM	1342	O	ALA	A 239	58.955	27.955	19.700	1.00	75.89	A
ATOM	1343	N	ASN	A 240	56.781	28.357	19.214	1.00	73.95	A
ATOM	1344	CA	ASN	A 240	56.967	29.553	18.389	1.00	71.07	A
ATOM	1345	CB	ASN	A 240	58.151	30.400	18.874	1.00	71.47	A
ATOM	1346	CG	ASN	A 240	59.439	30.055	18.174	1.00	72.06	A
ATOM	1347	OD1	ASN	A 240	59.575	30.149	16.943	1.00	72.03	A
ATOM	1348	ND2	ASN	A 240	60.470	29.665	18.964	1.00	71.91	A
ATOM	1349	C	ASN	A 240	57.188	29.178	16.928	1.00	69.41	A
ATOM	1350	O	ASN	A 240	57.480	28.024	16.624	1.00	70.09	A
ATOM	1351	N	ALA	A 241	57.055	30.165	16.038	1.00	66.62	A
ATOM	1352	CA	ALA	A 241	57.246	30.013	14.585	1.00	63.94	A
ATOM	1353	C	ALA	A 241	55.952	30.080	13.772	1.00	60.63	A
ATOM	1354	O	ALA	A 241	55.840	30.880	12.845	1.00	61.29	A
ATOM	1355	CB	ALA	A 241	57.979	28.704	14.246	1.00	65.23	A
ATOM	1356	N	PHE	A 242	54.984	29.236	14.113	1.00	56.72	A
ATOM	1357	CA	PHE	A 242	53.712	29.196	13.394	1.00	52.53	A
ATOM	1358	CB	PHE	A 242	53.419	27.767	12.923	1.00	49.14	A
ATOM	1359	CG	PHE	A 242	52.040	27.590	12.354	1.00	47.38	A
ATOM	1360	CD1	PHE	A 242	51.731	28.067	11.085	1.00	47.69	A
ATOM	1361	CD2	PHE	A 242	51.038	26.975	13.102	1.00	45.45	A
ATOM	1362	CE1	PHE	A 242	50.445	27.937	10.565	1.00	46.75	A
ATOM	1363	CE2	PHE	A 242	49.751	26.840	12.594	1.00	45.41	A
ATOM	1364	CZ	PHE	A 242	49.453	27.323	11.322	1.00	46.55	A
ATOM	1365	C	PHE	A 242	52.534	29.688	14.229	1.00	50.08	A
ATOM	1366	O	PHE	A 242	52.502	29.505	15.444	1.00	49.86	A
ATOM	1367	N	VAL	A 243	51.566	30.305	13.557	1.00	47.67	A
ATOM	1368	CA	VAL	A 243	50.355	30.809	14.200	1.00	46.21	A
ATOM	1369	CB	VAL	A 243	50.340	32.352	14.258	1.00	47.36	A

ATOM	1370	CG1	VAL A 243	49.012	32.844	14.825	1.00	47.54		A
ATOM	1371	CG2	VAL A 243	51.497	32.842	15.109	1.00	48.50		A
ATOM	1372	C	VAL A 243	49.150	30.342	13.389	1.00	44.12		A
ATOM	1373	O	VAL A 243	48.956	30.765	12.247	1.00	44.46		A
ATOM	1374	N	GLY A 244	48.348	29.467	13.985	1.00	40.48		A
ATOM	1375	CA	GLY A 244	47.176	28.941	13.306	1.00	37.65		A
ATOM	1376	C	GLY A 244	46.101	29.960	12.964	1.00	35.39		A
ATOM	1377	O	GLY A 244	46.313	31.168	13.065	1.00	35.92		A
ATOM	1378	N	THR A 245	44.936	29.463	12.560	1.00	33.30		A
ATOM	1379	CA	THR A 245	43.813	30.312	12.184	1.00	30.20		A
ATOM	1380	CB	THR A 245	42.593	29.450	11.829	1.00	32.00		A
ATOM	1381	OG1	THR A 245	42.952	28.573	10.755	1.00	32.81		A
ATOM	1382	CG2	THR A 245	41.419	30.319	11.390	1.00	28.34		A
ATOM	1383	C	THR A 245	43.476	31.296	13.296	1.00	27.96		A
ATOM	1384	O	THR A 245	43.212	30.907	14.434	1.00	25.46		A
ATOM	1385	N	ALA A 246	43.486	32.576	12.938	1.00	25.22		A
ATOM	1386	CA	ALA A 246	43.247	33.675	13.867	1.00	23.27		A
ATOM	1387	CB	ALA A 246	42.956	34.955	13.082	1.00	22.94		A
ATOM	1388	C	ALA A 246	42.178	33.475	14.934	1.00	21.27		A
ATOM	1389	O	ALA A 246	42.431	33.705	16.114	1.00	20.93		A
ATOM	1390	N	GLN A 247	40.988	33.047	14.536	1.00	19.67		A
ATOM	1391	CA	GLN A 247	39.911	32.886	15.504	1.00	20.17		A
ATOM	1392	CB	GLN 247	38.608	32.535	14.779	0.50	21.89		AC1
ATOM	1393	CG	GLN 247	38.522	33.076	13.355	0.50	26.18		AC1
ATOM	1394	CD	GLN 247	37.220	33.794	13.064	0.50	27.30		AC1
ATOM	1395	OE1	GLN 247	36.172	33.447	13.605	0.50	30.13		AC1
ATOM	1396	NE2	GLN 247	37.278	34.792	12.189	0.50	28.70		AC1
ATOM	1397	C	GLN A 247	40.181	31.849	16.595	1.00	19.43		A
ATOM	1398	O	GLN A 247	39.546	31.883	17.648	1.00	18.93		A
ATOM	1399	N	TYR A 248	41.132	30.948	16.359	1.00	18.60		A
ATOM	1400	CA	TYR A 248	41.441	29.896	17.329	1.00	19.20		A
ATOM	1401	CB	TYR A 248	41.333	28.529	16.642	1.00	17.53		A
ATOM	1402	CG	TYR A 248	40.013	28.362	15.927	1.00	19.32		A
ATOM	1403	CD1	TYR A 248	38.859	28.010	16.625	1.00	17.69		A
ATOM	1404	CE1	TYR A 248	37.617	27.976	15.990	1.00	18.18		A
ATOM	1405	CD2	TYR A 248	39.897	28.664	14.569	1.00	16.87		A
ATOM	1406	CE2	TYR A 248	38.665	28.635	13.924	1.00	19.17		A
ATOM	1407	CZ	TYR A 248	37.527	28.295	14.643	1.00	19.46		A
ATOM	1408	OH	TYR A 248	36.299	28.311	14.023	1.00	18.98		A
ATOM	1409	C	TYR A 248	42.810	30.039	17.993	1.00	20.42		A
ATOM	1410	O	TYR A 248	43.208	29.191	18.792	1.00	19.19		A
ATOM	1411	N	VAL A 249	43.523	31.114	17.673	1.00	20.20		A
ATOM	1412	CA	VAL A 249	44.841	31.343	18.251	1.00	20.91		A
ATOM	1413	CB	VAL A 249	45.542	32.532	17.570	1.00	21.18		A
ATOM	1414	CG1	VAL A 249	46.821	32.896	18.317	1.00	22.45		A
ATOM	1415	CG2	VAL A 249	45.862	32.170	16.139	1.00	24.01		A
ATOM	1416	C	VAL A 249	44.764	31.606	19.750	1.00	21.52		A
ATOM	1417	O	VAL A 249	43.915	32.368	20.216	1.00	22.72		A
ATOM	1418	N	SER A 250	45.654	30.965	20.503	1.00	20.70		A
ATOM	1419	CA	SER A 250	45.697	31.133	21.951	1.00	21.65		A
ATOM	1420	CB	SER A 250	46.370	29.919	22.613	1.00	22.02		A
ATOM	1421	OG	SER A 250	47.692	29.725	22.132	1.00	22.12		A
ATOM	1422	C	SER A 250	46.476	32.402	22.280	1.00	22.13		A
ATOM	1423	O	SER A 250	47.332	32.828	21.511	1.00	22.77		A
ATOM	1424	N	PRO A 251	46.180	33.029	23.425	1.00	22.23		A
ATOM	1425	CD	PRO A 251	45.163	32.684	24.433	1.00	22.97		A
ATOM	1426	CA	PRO A 251	46.893	34.254	23.800	1.00	22.52		A
ATOM	1427	CB	PRO A 251	46.233	34.650	25.127	1.00	23.06		A
ATOM	1428	CG	PRO A 251	45.726	33.329	25.676	1.00	22.55		A

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      ATOM   1429  C   PRO A 251      48.414  34.115  23.907  1.00 22.15       A
      ATOM   1430  O   PRO A 251      49.143  35.047  23.563  1.00 22.62       A
      ATOM   1431  N   GLU A 252      48.901  32.966  24.367  1.00 20.69       A
      ATOM   1432  CA  GLU A 252      50.347  32.772  24.500  1.00 21.40       A
   5  ATOM   1433  CB  GLU A 252      50.673  31.382  25.071  1.00 20.59       A
      ATOM   1434  CG  GLU A 252      49.993  30.232  24.352  1.00 21.91       A
      ATOM   1435  CD  GLU A 252      48.691  29.822  25.014  1.00 21.51       A
      ATOM   1436  OE1 GLU A 252      47.989  30.707  25.550  1.00 21.46       A
      ATOM   1437  OE2 GLU A 252      48.367  28.613  24.993  1.00 20.23       A
  10  ATOM   1438  C   GLU A 252      51.071  32.970  23.167  1.00 22.99       A
      ATOM   1439  O   GLU A 252      52.191  33.480  23.136  1.00 23.17       A
      ATOM   1440  N   LEU A 253      50.441  32.576  22.064  1.00 23.00       A
      ATOM   1441  CA  LEU A 253      51.068  32.753  20.758  1.00 25.62       A
      ATOM   1442  CB  LEU A 253      50.277  32.029  19.669  1.00 26.75       A
  15  ATOM   1443  CG  LEU A 253      50.743  30.620  19.296  1.00 31.87       A
      ATOM   1444  CD1 LEU A 253      50.433  29.651  20.422  1.00 31.81       A
      ATOM   1445  CD2 LEU A 253      50.044  30.179  18.015  1.00 31.86       A
      ATOM   1446  C   LEU A 253      51.201  34.228  20.371  1.00 26.94       A
      ATOM   1447  O   LEU A 253      52.107  34.601  19.626  1.00 27.09       A
  20  ATOM   1448  N   LEU A 254      50.297  35.059  20.877  1.00 25.83       A
      ATOM   1449  CA  LEU A 254      50.297  36.485  20.564  1.00 27.26       A
      ATOM   1450  CB  LEU A 254      48.858  37.006  20.564  1.00 25.84       A
      ATOM   1451  CG  LEU A 254      47.882  36.290  19.621  1.00 24.69       A
      ATOM   1452  CD1 LEU A 254      46.459  36.724  19.932  1.00 23.64       A
  25  ATOM   1453  CD2 LEU A 254      48.236  36.597  18.177  1.00 24.24       A
      ATOM   1454  C   LEU A 254      51.134  37.314  21.537  1.00 30.62       A
      ATOM   1455  O   LEU A 254      51.633  38.383  21.187  1.00 32.35       A
      ATOM   1456  N   THR A 255      51.292  36.821  22.758  1.00 32.47       A
      ATOM   1457  CA  THR A 255      52.056  37.547  23.759  1.00 36.70       A
  30  ATOM   1458  CB  THR A 255      51.368  37.478  25.127  1.00 34.51       A
      ATOM   1459  OG1 THR A 255      51.188  36.106  25.494  1.00 35.49       A
      ATOM   1460  CG2 THR A 255      50.013  38.166  25.077  1.00 33.40       A
      ATOM   1461  C   THR A 255      53.477  37.035  23.910  1.00 40.09       A
      ATOM   1462  O   THR A 255      54.430  37.793  23.772  1.00 43.69       A
  35  ATOM   1463  N   GLU A 256      53.617  35.747  24.189  1.00 44.77       A
      ATOM   1464  CA  GLU A 256      54.932  35.144  24.382  1.00 49.15       A
      ATOM   1465  CB  GLU A 256      54.866  34.143  25.534  1.00 51.24       A
      ATOM   1466  CG  GLU A 256      54.514  34.786  26.862  1.00 56.03       A
      ATOM   1467  CD  GLU A 256      54.053  33.780  27.893  1.00 58.83       A
  40  ATOM   1468  OE1 GLU A 256      54.766  32.776  28.107  1.00 62.13       A
      ATOM   1469  OE2 GLU A 256      52.979  33.996  28.494  1.00 60.34       A
      ATOM   1470  C   GLU A 256      55.475  34.456  23.137  1.00 50.09       A
      ATOM   1471  O   GLU A 256      56.616  33.995  23.127  1.00 50.42       A
      ATOM   1472  N   LYS A 257      54.658  34.389  22.090  1.00 51.21       A
  45  ATOM   1473  CA  LYS A 257      55.064  33.746  20.845  1.00 51.22       A
      ATOM   1474  CB  LYS A 257      56.244  34.502  20.227  1.00 53.28       A
      ATOM   1475  CG  LYS A 257      56.558  34.125  18.790  1.00 55.19       A
      ATOM   1476  CD  LYS A 257      57.709  34.961  18.253  1.00 57.52       A
      ATOM   1477  CE  LYS A 257      57.952  34.694  16.777  1.00 58.52       A
  50  ATOM   1478  NZ  LYS A 257      58.290  33.268  16.515  1.00 60.88       A
      ATOM   1479  C   LYS A 257      55.467  32.302  21.138  1.00 50.74       A
      ATOM   1480  O   LYS A 257      56.432  31.790  20.577  1.00 52.26       A
      ATOM   1481  N   SER A 258      54.721  31.654  22.027  1.00 48.07       A
      ATOM   1482  CA  SER A 258      54.999  30.273  22.402  1.00 46.87       A
  55  ATOM   1483  CB  SER A 258      55.590  30.229  23.812  1.00 48.88       A
      ATOM   1484  OG  SER A 258      54.741  30.892  24.734  1.00 53.14       A
      ATOM   1485  C   SER A 258      53.735  29.415  22.342  1.00 44.07       A
      ATOM   1486  O   SER A 258      52.617  29.932  22.417  1.00 44.17       A
      ATOM   1487  N   ALA A 259      53.917  28.105  22.204  1.00 38.30       A
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       ATOM    1488  CA  ALA A 259      52.793  27.180  22.127  1.00 34.73      A
       ATOM    1489  CB  ALA A 259      52.551  26.779  20.684  1.00 34.16      A
       ATOM    1490  C   ALA A 259      53.042  25.940  22.977  1.00 32.34      A
       ATOM    1491  O   ALA A 259      54.172  25.459  23.086  1.00 31.81      A
  5    ATOM    1492  N   CYS A 260      51.975  25.428  23.579  1.00 28.58      A
       ATOM    1493  CA  CYS A 260      52.056  24.244  24.425  1.00 26.27      A
       ATOM    1494  CB  CYS A 260      52.183  24.654  25.892  1.00 26.53      A
       ATOM    1495  SG  CYS A 260      50.846  25.739  26.469  1.00 32.91      A
       ATOM    1496  C   CYS A 260      50.786  23.435  24.224  1.00 22.83      A
 10    ATOM    1497  O   CYS A 260      49.892  23.856  23.495  1.00 22.14      A
       ATOM    1498  N   LYS A 261      50.706  22.277  24.868  1.00 20.02      A
       ATOM    1499  CA  LYS A 261      49.526  21.434  24.744  1.00 20.65      A
       ATOM    1500  CB  LYS A 261      49.619  20.243  25.696  1.00 23.28      A
       ATOM    1501  CG  LYS A 261      50.716  19.253  25.347  1.00 27.44      A
 15    ATOM    1502  CD  LYS A 261      50.732  18.117  26.350  1.00 29.98      A
       ATOM    1503  CE  LYS A 261      51.922  17.203  26.134  1.00 32.34      A
       ATOM    1504  NZ  LYS A 261      51.940  16.121  27.153  1.00 33.28      A
       ATOM    1505  C   LYS A 261      48.268  22.229  25.062  1.00 19.20      A
       ATOM    1506  O   LYS A 261      47.253  22.092  24.387  1.00 18.08      A
 20    ATOM    1507  N   SER A 262      48.358  23.068  26.089  1.00 16.92      A
       ATOM    1508  CA  SER A 262      47.235  23.883  26.534  1.00 18.13      A
       ATOM    1509  CB  SER A 262      47.664  24.698  27.770  1.00 18.27      A
       ATOM    1510  OG  SER A 262      46.517  25.258  28.421  1.00 22.53      A
       ATOM    1511  C   SER A 262      46.736  24.811  25.424  1.00 16.77      A
 25    ATOM    1512  O   SER A 262      45.591  25.254  25.450  1.00 15.69      A
       ATOM    1513  N   SER A 263      47.595  25.118  24.456  1.00 16.44      A
       ATOM    1514  CA  SER A 263      47.175  25.970  23.347  1.00 16.89      A
       ATOM    1515  CB  SER A 263      48.304  26.228  22.382  1.00 18.49      A
       ATOM    1516  OG  SER A 263      49.402  26.909  23.031  1.00 22.10      A
 30    ATOM    1517  C   SER A 263      46.040  25.257  22.612  1.00 17.79      A
       ATOM    1518  O   SER A 263      45.099  25.898  22.148  1.00 17.57      A
       ATOM    1519  N   ASP A 264      46.119  23.928  22.517  1.00 16.30      A
       ATOM    1520  CA  ASP A 264      45.069  23.166  21.836  1.00 16.72      A
       ATOM    1521  CB  ASP A 264      45.483  21.704  21.620  1.00 15.92      A
 35    ATOM    1522  CG  ASP A 264      46.544  21.539  20.548  1.00 17.93      A
       ATOM    1523  OD1 ASP A 264      46.642  22.412  19.661  1.00 16.78      A
       ATOM    1524  OD2 ASP A 264      47.265  20.515  20.579  1.00 16.64      A
       ATOM    1525  C   ASP A 264      43.773  23.194  22.646  1.00 17.67      A
       ATOM    1526  O   ASP A 264      42.681  23.197  22.076  1.00 18.27      A
 40    ATOM    1527  N   LEU A 265      43.898  23.205  23.974  1.00 15.49      A
       ATOM    1528  CA  LEU A 265      42.730  23.232  24.849  1.00 14.75      A
       ATOM    1529  CB  LEU A 265      43.147  23.038  26.313  1.00 11.38      A
       ATOM    1530  CG  LEU A 265      43.711  21.641  26.621  1.00 14.04      A
       ATOM    1531  CD1 LEU A 265      44.249  21.579  28.052  1.00 13.96      A
 45    ATOM    1532  CD2 LEU A 265      42.619  20.603  26.416  1.00 11.62      A
       ATOM    1533  C   LEU A 265      41.999  24.557  24.675  1.00 15.13      A
       ATOM    1534  O   LEU A 265      40.777  24.620  24.785  1.00 16.75      A
       ATOM    1535  N   TRP A 266      42.746  25.622  24.405  1.00 16.08      A
       ATOM    1536  CA  TRP A 266      42.118  26.918  24.184  1.00 16.96      A
 50    ATOM    1537  CB  TRP A 266      43.176  28.015  24.023  1.00 17.28      A
       ATOM    1538  CG  TRP A 266      42.618  29.326  23.521  1.00 20.54      A
       ATOM    1539  CD2 TRP A 266      42.313  30.490  24.301  1.00 20.07      A
       ATOM    1540  CE2 TRP A 266      41.782  31.459  23.417  1.00 20.46      A
       ATOM    1541  CE3 TRP A 266      42.435  30.810  25.660  1.00 20.68      A
 55    ATOM    1542  CD1 TRP A 266      42.270  29.631  22.231  1.00 19.53      A
       ATOM    1543  NE1 TRP A 266      41.769  30.908  22.163  1.00 19.61      A
       ATOM    1544  CZ2 TRP A 266      41.372  32.727  23.850  1.00 20.90      A
       ATOM    1545  CZ3 TRP A 266      42.026  32.073  26.091  1.00 19.45      A
       ATOM    1546  CH2 TRP A 266      41.501  33.015  25.185  1.00 20.71      A
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	ATOM	1547	C	TRP A 266	41.284	26.795	22.913	1.00 17.22	A
	ATOM	1548	O	TRP A 266	40.139	27.240	22.863	1.00 18.03	A
	ATOM	1549	N	ALA A 267	41.863	26.181	21.886	1.00 17.50	A
	ATOM	1550	CA	ALA A 267	41.155	25.990	20.626	1.00 16.16	A
5	ATOM	1551	CB	ALA A 267	42.050	25.290	19.621	1.00 14.28	A
	ATOM	1552	C	ALA A 267	39.901	25.159	20.891	1.00 16.28	A
	ATOM	1553	O	ALA A 267	38.835	25.436	20.346	1.00 16.46	A
	ATOM	1554	N	LEU A 268	40.031	24.144	21.739	1.00 16.57	A
	ATOM	1555	CA	LEU A 268	38.890	23.299	22.084	1.00 17.03	A
10	ATOM	1556	CB	LEU A 268	39.292	22.260	23.139	1.00 15.35	A
	ATOM	1557	CG	LEU A 268	38.158	21.429	23.754	1.00 19.00	A
	ATOM	1558	CD1	LEU A 268	37.505	20.578	22.678	1.00 16.17	A
	ATOM	1559	CD2	LEU A 268	38.718	20.537	24.881	1.00 17.49	A
	ATOM	1560	C	LEU A 268	37.766	24.179	22.628	1.00 15.72	A
15	ATOM	1561	O	LEU A 268	36.603	24.031	22.247	1.00 15.28	A
	ATOM	1562	N	GLY A 269	38.118	25.099	23.520	1.00 14.34	A
	ATOM	1563	CA	GLY A 269	37.124	25.989	24.092	1.00 13.39	A
	ATOM	1564	C	GLY A 269	36.406	26.808	23.031	1.00 14.94	A
	ATOM	1565	O	GLY A 269	35.193	27.014	23.114	1.00 14.76	A
20	ATOM	1566	N	CYS A 270	37.146	27.279	22.030	1.00 13.86	A
	ATOM	1567	CA	CYS A 270	36.539	28.061	20.958	1.00 16.80	A
	ATOM	1568	CB	CYS A 270	37.611	28.634	20.023	1.00 15.97	A
	ATOM	1569	SG	CYS A 270	38.751	29.810	20.780	1.00 20.48	A
	ATOM	1570	C	CYS A 270	35.598	27.175	20.140	1.00 17.50	A
25	ATOM	1571	O	CYS A 270	34.516	27.604	19.741	1.00 18.38	A
	ATOM	1572	N	ILE A 271	36.022	25.939	19.887	1.00 16.99	A
	ATOM	1573	CA	ILE A 271	35.221	25.004	19.104	1.00 16.66	A
	ATOM	1574	CB	ILE A 271	36.038	23.741	18.778	1.00 16.53	A
	ATOM	1575	CG2	ILE A 271	35.155	22.694	18.102	1.00 16.34	A
30	ATOM	1576	CG1	ILE A 271	37.222	24.129	17.882	1.00 15.59	A
	ATOM	1577	CD1	ILE A 271	38.239	23.018	17.690	1.00 14.88	A
	ATOM	1578	C	ILE A 271	33.920	24.626	19.809	1.00 16.74	A
	ATOM	1579	O	ILE A 271	32.865	24.576	19.179	1.00 17.12	A
	ATOM	1580	N	ILE A 272	33.990	24.357	21.111	1.00 16.13	A
35	ATOM	1581	CA	ILE A 272	32.785	24.021	21.862	1.00 18.30	A
	ATOM	1582	CB	ILE A 272	33.097	23.747	23.346	1.00 17.77	A
	ATOM	1583	CG2	ILE A 272	31.796	23.666	24.152	1.00 17.96	A
	ATOM	1584	CG1	ILE A 272	33.877	22.437	23.481	1.00 19.55	A
	ATOM	1585	CD1	ILE A 272	34.446	22.217	24.886	1.00 18.64	A
40	ATOM	1586	C	ILE A 272	31.824	25.207	21.776	1.00 19.51	A
	ATOM	1587	O	ILE A 272	30.624	25.037	21.554	1.00 20.44	A
	ATOM	1588	N	TYR A 273	32.362	26.409	21.947	1.00 18.52	A
	ATOM	1589	CA	TYR A 273	31.553	27.615	21.881	1.00 20.48	A
	ATOM	1590	CB	TYR A 273	32.418	28.847	22.162	1.00 18.98	A
45	ATOM	1591	CG	TYR A 273	31.663	30.161	22.125	1.00 20.26	A
	ATOM	1592	CD1	TYR A 273	31.229	30.709	20.916	1.00 20.67	A
	ATOM	1593	CE1	TYR A 273	30.536	31.917	20.880	1.00 20.98	A
	ATOM	1594	CD2	TYR A 273	31.383	30.857	23.302	1.00 19.82	A
	ATOM	1595	CE2	TYR A 273	30.691	32.062	23.280	1.00 20.62	A
50	ATOM	1596	CZ	TYR A 273	30.271	32.587	22.067	1.00 21.15	A
	ATOM	1597	OH	TYR A 273	29.588	33.776	22.049	1.00 21.86	A
	ATOM	1598	C	TYR A 273	30.902	27.730	20.507	1.00 21.54	A
	ATOM	1599	O	TYR A 273	29.719	28.049	20.401	1.00 22.80	A
	ATOM	1600	N	GLN A 274	31.676	27.454	19.461	1.00 21.05	A
55	ATOM	1601	CA	GLN A 274	31.176	27.538	18.095	1.00 21.48	A
	ATOM	1602	CB	GLN A 274	32.323	27.341	17.097	1.00 21.41	A
	ATOM	1603	CG	GLN A 274	31.934	27.596	15.645	1.00 23.15	A
	ATOM	1604	CD	GLN A 274	33.131	27.588	14.706	1.00 24.80	A
	ATOM	1605	OE1	GLN A 274	34.276	27.446	15.139	1.00 22.51	A

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      ATOM   1606  NE2 GLN A 274     32.870  27.750  13.413  1.00 22.96        A
      ATOM   1607  C   GLN A 274     30.076  26.517  17.828  1.00 21.51        A
      ATOM   1608  O   GLN A 274     29.123  26.806  17.108  1.00 20.50        A
      ATOM   1609  N   LEU A 275     30.207  25.324  18.403  1.00 21.44        A
  5   ATOM   1610  CA  LEU A 275     29.196  24.282  18.208  1.00 20.95        A
      ATOM   1611  CB  LEU A 275     29.645  22.958  18.846  1.00 19.11        A
      ATOM   1612  CG  LEU A 275     30.775  22.182  18.159  1.00 21.43        A
      ATOM   1613  CD1 LEU A 275     31.118  20.936  18.963  1.00 17.64        A
      ATOM   1614  CD2 LEU A 275     30.342  21.795  16.754  1.00 20.34        A
 10   ATOM   1615  C   LEU A 275     27.860  24.697  18.815  1.00 21.32        A
      ATOM   1616  O   LEU A 275     26.802  24.461  18.229  1.00 19.75        A
      ATOM   1617  N   VAL A 276     27.921  25.322  19.987  1.00 19.10        A
      ATOM   1618  CA  VAL A 276     26.724  25.750  20.702  1.00 22.47        A
      ATOM   1619  CB  VAL A 276     27.011  25.882  22.217  1.00 20.87        A
 15   ATOM   1620  CG1 VAL A 276     25.742  26.291  22.957  1.00 19.68        A
      ATOM   1621  CG2 VAL A 276     27.550  24.558  22.766  1.00 19.43        A
      ATOM   1622  C   VAL A 276     26.127  27.075  20.211  1.00 23.89        A
      ATOM   1623  O   VAL A 276     24.910  27.199  20.070  1.00 24.90        A
      ATOM   1624  N   ALA A 277     26.983  28.062  19.965  1.00 24.56        A
 20   ATOM   1625  CA  ALA A 277     26.533  29.374  19.518  1.00 24.72        A
      ATOM   1626  CB  ALA A 277     27.504  30.444  19.999  1.00 24.36        A
      ATOM   1627  C   ALA A 277     26.378  29.458  18.005  1.00 25.76        A
      ATOM   1628  O   ALA A 277     25.577  30.242  17.502  1.00 26.39        A
      ATOM   1629  N   GLY A 278     27.142  28.651  17.280  1.00 25.13        A
 25   ATOM   1630  CA  GLY A 278     27.062  28.673  15.834  1.00 25.58        A
      ATOM   1631  C   GLY A 278     28.163  29.524  15.231  1.00 26.50        A
      ATOM   1632  O   GLY A 278     28.374  29.510  14.015  1.00 28.17        A
      ATOM   1633  N   LEU A 279     28.866  30.262  16.086  1.00 24.44        A
      ATOM   1634  CA  LEU A 279     29.962  31.130  15.656  1.00 25.21        A
 30   ATOM   1635  CB  LEU A 279     29.468  32.575  15.500  1.00 25.78        A
      ATOM   1636  CG  LEU A 279     28.364  32.899  14.490  1.00 28.17        A
      ATOM   1637  CD1 LEU A 279     27.922  34.344  14.684  1.00 26.60        A
      ATOM   1638  CD2 LEU A 279     28.862  32.670  13.071  1.00 26.52        A
      ATOM   1639  C   LEU A 279     31.093  31.116  16.687  1.00 23.47        A
 35   ATOM   1640  O   LEU A 279     30.848  30.994  17.882  1.00 24.44        A
      ATOM   1641  N   PRO A 280     32.349  31.239  16.236  1.00 23.35        A
      ATOM   1642  CD  PRO A 280     32.831  31.404  14.855  1.00 22.26        A
      ATOM   1643  CA  PRO A 280     33.464  31.239  17.189  1.00 23.81        A
      ATOM   1644  CB  PRO A 280     34.692  31.293  16.282  1.00 23.24        A
 40   ATOM   1645  CG  PRO A 280     34.189  32.020  15.073  1.00 24.89        A
      ATOM   1646  C   PRO A 280     33.353  32.444  18.137  1.00 22.69        A
      ATOM   1647  O   PRO A 280     32.750  33.457  17.788  1.00 22.11        A
      ATOM   1648  N   PRO A 281     33.939  32.344  19.345  1.00 23.06        A
      ATOM   1649  CD  PRO A 281     34.810  31.223  19.734  1.00 21.37        A
 45   ATOM   1650  CA  PRO A 281     33.935  33.375  20.395  1.00 23.67        A
      ATOM   1651  CB  PRO A 281     34.781  32.751  21.509  1.00 24.89        A
      ATOM   1652  CG  PRO A 281     34.749  31.287  21.219  1.00 25.24        A
      ATOM   1653  C   PRO A 281     34.481  34.752  20.017  1.00 23.75        A
      ATOM   1654  O   PRO A 281     33.869  35.781  20.317  1.00 21.02        A
 50   ATOM   1655  N   PHE A 282     35.644  34.763  19.379  1.00 22.17        A
      ATOM   1656  CA  PHE A 282     36.293  36.007  18.998  1.00 23.16        A
      ATOM   1657  CB  PHE A 282     37.765  35.943  19.406  1.00 21.01        A
      ATOM   1658  CG  PHE A 282     37.975  35.482  20.822  1.00 22.66        A
      ATOM   1659  CD1 PHE A 282     37.806  36.361  21.888  1.00 20.06        A
 55   ATOM   1660  CD2 PHE A 282     38.291  34.151  21.093  1.00 20.72        A
      ATOM   1661  CE1 PHE A 282     37.947  35.921  23.206  1.00 22.66        A
      ATOM   1662  CE2 PHE A 282     38.433  33.702  22.405  1.00 20.97        A
      ATOM   1663  CZ  PHE A 282     38.261  34.590  23.466  1.00 19.58        A
      ATOM   1664  C   PHE A 282     36.169  36.263  17.503  1.00 24.39        A
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      ATOM   1665  O    PHE A 282    36.802  35.585  16.694  1.00 25.80      A
      ATOM   1666  N    ARG A 283    35.355  37.248  17.142  1.00 24.99      A
      ATOM   1667  CA   ARG A 283    35.141  37.594  15.741  1.00 26.33      A
      ATOM   1668  CB   ARG A 283    33.721  37.209  15.316  1.00 28.91      A
   5  ATOM   1669  CG   ARG A 283    33.293  35.808  15.724  1.00 30.27      A
      ATOM   1670  CD   ARG A 283    31.904  35.493  15.188  1.00 33.36      A
      ATOM   1671  NE   ARG A 283    30.890  36.392  15.733  1.00 32.76      A
      ATOM   1672  CZ   ARG A 283    30.372  36.287  16.952  1.00 34.79      A
      ATOM   1673  NH1  ARG A 283    30.767  35.317  17.768  1.00 35.77      A
  10  ATOM   1674  NH2  ARG A 283    29.458  37.156  17.359  1.00 36.12      A
      ATOM   1675  C    ARG A 283    35.328  39.096  15.544  1.00 26.47      A
      ATOM   1676  O    ARG A 283    35.029  39.888  16.438  1.00 26.28      A
      ATOM   1677  N    ALA A 284    35.818  39.486  14.373  1.00 26.70      A
      ATOM   1678  CA   ALA A 284    36.033  40.899  14.079  1.00 27.84      A
  15  ATOM   1679  CB   ALA A 284    37.188  41.442  14.914  1.00 26.24      A
      ATOM   1680  C    ALA A 284    36.327  41.077  12.602  1.00 28.35      A
      ATOM   1681  O    ALA A 284    36.560  40.101  11.891  1.00 29.91      A
      ATOM   1682  N    GLY A 285    36.332  42.329  12.153  1.00 29.29      A
      ATOM   1683  CA   GLY A 285    36.577  42.631  10.753  1.00 29.52      A
  20  ATOM   1684  C    GLY A 285    37.893  42.156  10.168  1.00 30.12      A
      ATOM   1685  O    GLY A 285    37.974  41.862   8.976  1.00 30.60      A
      ATOM   1686  N    ASN A 286    38.939  42.097  10.983  1.00 28.49      A
      ATOM   1687  CA   ASN A 286    40.231  41.644  10.489  1.00 26.71      A
      ATOM   1688  CB   ASN A 286    41.050  42.825   9.945  1.00 26.11      A
  25  ATOM   1689  CG   ASN A 286    41.310  43.900  10.990  1.00 27.83      A
      ATOM   1690  OD1  ASN A 286    41.877  43.631  12.049  1.00 27.84      A
      ATOM   1691  ND2  ASN A 286    40.908  45.131  10.685  1.00 25.95      A
      ATOM   1692  C    ASN A 286    40.997  40.924  11.584  1.00 26.03      A
      ATOM   1693  O    ASN A 286    40.540  40.851  12.723  1.00 25.66      A
  30  ATOM   1694  N    GLU A 287    42.162  40.391  11.239  1.00 24.81      A
      ATOM   1695  CA   GLU A 287    42.965  39.662  12.206  1.00 27.59      A
      ATOM   1696  CB   GLU A 287    44.145  38.985  11.510  1.00 30.17      A
      ATOM   1697  CG   GLU A 287    43.776  37.632  10.931  1.00 38.21      A
      ATOM   1698  CD   GLU A 287    44.900  36.998  10.140  1.00 41.86      A
  35  ATOM   1699  OE1  GLU A 287    46.061  37.036  10.608  1.00 43.08      A
      ATOM   1700  OE2  GLU A 287    44.612  36.449   9.052  1.00 45.22      A
      ATOM   1701  C    GLU A 287    43.459  40.485  13.383  1.00 25.05      A
      ATOM   1702  O    GLU A 287    43.382  40.030  14.521  1.00 26.41      A
      ATOM   1703  N    TYR A 288    43.966  41.685  13.122  1.00 23.04      A
  40  ATOM   1704  CA   TYR A 288    44.460  42.528  14.205  1.00 22.34      A
      ATOM   1705  CB   TYR A 288    44.867  43.913  13.691  1.00 21.07      A
      ATOM   1706  CG   TYR A 288    45.275  44.858  14.805  1.00 21.07      A
      ATOM   1707  CD1  TYR A 288    46.533  44.762  15.405  1.00 21.23      A
      ATOM   1708  CE1  TYR A 288    46.891  45.588  16.475  1.00 20.43      A
  45  ATOM   1709  CD2  TYR A 288    44.380  45.809  15.302  1.00 22.32      A
      ATOM   1710  CE2  TYR A 288    44.725  46.637  16.373  1.00 23.28      A
      ATOM   1711  CZ   TYR A 288    45.981  46.518  16.953  1.00 22.96      A
      ATOM   1712  OH   TYR A 288    46.316  47.313  18.024  1.00 23.18      A
      ATOM   1713  C    TYR A 288    43.402  42.698  15.288  1.00 21.38      A
  50  ATOM   1714  O    TYR A 288    43.710  42.616  16.473  1.00 22.09      A
      ATOM   1715  N    LEU A 289    42.159  42.939  14.874  1.00 21.88      A
      ATOM   1716  CA   LEU A 289    41.055  43.130  15.811  1.00 21.98      A
      ATOM   1717  CB   LEU A 289    39.821  43.673  15.078  1.00 22.90      A
      ATOM   1718  CG   LEU A 289    39.896  45.130  14.601  1.00 26.52      A
  55  ATOM   1719  CD1  LEU A 289    38.706  45.436  13.696  1.00 26.55      A
      ATOM   1720  CD2  LEU A 289    39.914  46.071  15.807  1.00 23.13      A
      ATOM   1721  C    LEU A 289    40.686  41.849  16.560  1.00 21.24      A
      ATOM   1722  O    LEU A 289    40.256  41.897  17.715  1.00 20.72      A
      ATOM   1723  N    ILE A 290    40.843  40.708  15.900  1.00 19.62      A
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     ATOM   1724   CA    ILE A 290      40.538  39.433  16.533  1.00 18.54      A
     ATOM   1725   CB    ILE A 290      40.560  38.281  15.509  1.00 18.52      A
     ATOM   1726   CG2   ILE A 290      40.503  36.934  16.234  1.00 17.63      A
     ATOM   1727   CG1   ILE A 290      39.378  38.429  14.545  1.00 18.88      A
  5  ATOM   1728   CD1   ILE A 290      39.421  37.483  13.357  1.00 19.81      A
     ATOM   1729   C     ILE A 290      41.578  39.167  17.618  1.00 19.09      A
     ATOM   1730   O     ILE A 290      41.236  38.788  18.737  1.00 18.20      A
     ATOM   1731   N     PHE A 291      42.849  39.376  17.286  1.00 18.76      A
     ATOM   1732   CA    PHE A 291      43.925  39.156  18.247  1.00 20.75      A
 10  ATOM   1733   CB    PHE A 291      45.286  39.434  17.606  1.00 20.71      A
     ATOM   1734   CG    PHE A 291      45.644  38.480  16.503  1.00 22.92      A
     ATOM   1735   CD1   PHE A 291      45.065  37.214  16.443  1.00 22.98      A
     ATOM   1736   CD2   PHE A 291      46.588  38.830  15.543  1.00 22.91      A
     ATOM   1737   CE1   PHE A 291      45.423  36.310  15.440  1.00 24.51      A
 15  ATOM   1738   CE2   PHE A 291      46.954  37.931  14.535  1.00 25.54      A
     ATOM   1739   CZ    PHE A 291      46.370  36.670  14.485  1.00 23.29      A
     ATOM   1740   C     PHE A 291      43.739  40.061  19.451  1.00 21.72      A
     ATOM   1741   O     PHE A 291      43.992  39.671  20.593  1.00 22.32      A
     ATOM   1742   N     GLN A 292      43.284  41.275  19.178  1.00 23.27      A
 20  ATOM   1743   CA    GLN A 292      43.055  42.264  20.216  1.00 24.01      A
     ATOM   1744   CB    GLN A 292      42.574  43.559  19.562  1.00 25.77      A
     ATOM   1745   CG    GLN A 292      42.577  44.773  20.447  1.00 28.45      A
     ATOM   1746   CD    GLN A 292      42.469  46.057  19.638  1.00 29.83      A
     ATOM   1747   OE1   GLN A 292      41.520  46.244  18.872  1.00 27.16      A
 25  ATOM   1748   NE2   GLN A 292      43.449  46.944  19.799  1.00 27.61      A
     ATOM   1749   C     GLN A 292      42.018  41.733  21.204  1.00 22.97      A
     ATOM   1750   O     GLN A 292      42.200  41.832  22.415  1.00 21.64      A
     ATOM   1751   N     LYS A 293      40.937  41.154  20.687  1.00 21.82      A
     ATOM   1752   CA    LYS A 293      39.895  40.612  21.558  1.00 22.18      A
 30  ATOM   1753   CB    LYS A 293      38.664  40.223  20.740  1.00 22.69      A
     ATOM   1754   CG    LYS A 293      37.919  41.407  20.153  1.00 25.78      A
     ATOM   1755   CD    LYS A 293      36.651  40.961  19.429  1.00 27.88      A
     ATOM   1756   CE    LYS A 293      35.857  42.161  18.926  1.00 30.85      A
     ATOM   1757   NZ    LYS A 293      34.612  41.750  18.214  1.00 32.98      A
 35  ATOM   1758   C     LYS A 293      40.398  39.398  22.343  1.00 21.20      A
     ATOM   1759   O     LYS A 293      40.041  39.204  23.509  1.00 22.01      A
     ATOM   1760   N     ILE A 294      41.226  38.583  21.702  1.00 19.91      A
     ATOM   1761   CA    ILE A 294      41.774  37.394  22.347  1.00 20.28      A
     ATOM   1762   CB    ILE A 294      42.631  36.575  21.349  1.00 18.98      A
 40  ATOM   1763   CG2   ILE A 294      43.481  35.550  22.098  1.00 17.70      A
     ATOM   1764   CG1   ILE A 294      41.716  35.897  20.318  1.00 17.93      A
     ATOM   1765   CD1   ILE A 294      42.467  35.237  19.178  1.00 16.21      A
     ATOM   1766   C     ILE A 294      42.618  37.727  23.587  1.00 21.94      A
     ATOM   1767   O     ILE A 294      42.366  37.199  24.673  1.00 20.86      A
 45  ATOM   1768   N     ILE A 295      43.610  38.600  23.439  1.00 21.88      A
     ATOM   1769   CA    ILE A 295      44.461  38.934  24.582  1.00 24.25      A
     ATOM   1770   CB    ILE A 295      45.668  39.805  24.175  1.00 23.93      A
     ATOM   1771   CG2   ILE A 295      46.514  39.066  23.140  1.00 24.61      A
     ATOM   1772   CG1   ILE A 295      45.189  41.151  23.637  1.00 24.58      A
 50  ATOM   1773   CD1   ILE A 295      46.317  42.149  23.433  1.00 26.69      A
     ATOM   1774   C     ILE A 295      43.720  39.636  25.717  1.00 24.80      A
     ATOM   1775   O     ILE A 295      44.214  39.687  26.842  1.00 24.76      A
     ATOM   1776   N     LYS A 296      42.539  40.173  25.425  1.00 25.33      A
     ATOM   1777   CA    LYS A 296      41.743  40.853  26.444  1.00 26.80      A
 55  ATOM   1778   CB    LYS A 296      41.178  42.170  25.894  1.00 27.39      A
     ATOM   1779   CG    LYS A 296      42.240  43.141  25.413  1.00 31.79      A
     ATOM   1780   CD    LYS A 296      41.634  44.410  24.826  1.00 35.56      A
     ATOM   1781   CE    LYS A 296      41.009  45.283  25.900  1.00 39.29      A
     ATOM   1782   NZ    LYS A 296      40.564  46.603  25.357  1.00 41.72      A
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   ATOM   1783  C   LYS A 296      40.593 39.958 26.893  1.00 25.50      A
   ATOM   1784  O   LYS A 296      39.770 40.361 27.713  1.00 24.02      A
   ATOM   1785  N   LEU A 297      40.550 38.742 26.349  1.00 25.67      A
   ATOM   1786  CA  LEU A 297      39.500 37.777 26.666  1.00 25.16      A
 5 ATOM   1787  CB  LEU A 297      39.632 37.285 28.111  1.00 24.80      A
   ATOM   1788  CG  LEU A 297      38.766 36.068 28.460  1.00 26.43      A
   ATOM   1789  CD1 LEU A 297      39.238 34.852 27.646  1.00 26.70      A
   ATOM   1790  CD2 LEU A 297      38.856 35.777 29.951  1.00 24.84      A
   ATOM   1791  C   LEU A 297      38.151 38.459 26.467  1.00 25.11      A
10 ATOM   1792  O   LEU A 297      37.261 38.378 27.309  1.00 25.28      A
   ATOM   1793  N   GLU A 298      38.007 39.127 25.331  1.00 24.98      A
   ATOM   1794  CA  GLU A 298      36.786 39.847 25.023  1.00 25.31      A
   ATOM   1795  CB  GLU A 298      37.143 41.139 24.291  1.00 27.13      A
   ATOM   1796  CG  GLU A 298      35.991 42.092 24.108  1.00 31.28      A
15 ATOM   1797  CD  GLU A 298      36.419 43.362 23.410  1.00 34.40      A
   ATOM   1798  OE1 GLU A 298      37.348 44.027 23.918  1.00 35.90      A
   ATOM   1799  OE2 GLU A 298      35.832 43.693 22.359  1.00 36.16      A
   ATOM   1800  C   GLU A 298      35.766 39.057 24.207  1.00 23.79      A
   ATOM   1801  O   GLU A 298      35.832 39.017 22.979  1.00 24.35      A
20 ATOM   1802  N   TYR A 299      34.825 38.427 24.902  1.00 23.45      A
   ATOM   1803  CA  TYR A 299      33.760 37.663 24.265  1.00 23.98      A
   ATOM   1804  CB  TYR A 299      34.264 36.304 23.755  1.00 20.13      A
   ATOM   1805  CG  TYR A 299      34.348 35.233 24.828  1.00 21.17      A
   ATOM   1806  CD1 TYR A 299      35.336 35.279 25.810  1.00 19.32      A
25 ATOM   1807  CE1 TYR A 299      35.389 34.332 26.826  1.00 19.30      A
   ATOM   1808  CD2 TYR A 299      33.410 34.201 24.888  1.00 18.96      A
   ATOM   1809  CE2 TYR A 299      33.456 33.243 25.907  1.00 19.41      A
   ATOM   1810  CZ  TYR A 299      34.449 33.321 26.870  1.00 18.79      A
   ATOM   1811  OH  TYR A 299      34.511 32.401 27.881  1.00 18.77      A
30 ATOM   1812  C   TYR A 299      32.699 37.437 25.331  1.00 25.20      A
   ATOM   1813  O   TYR A 299      32.942 37.681 26.506  1.00 26.46      A
   ATOM   1814  N   ASP A 300      31.522 36.981 24.927  1.00 26.94      A
   ATOM   1815  CA  ASP A 300      30.467 36.710 25.891  1.00 30.60      A
   ATOM   1816  CB  ASP A 300      29.665 37.981 26.179  1.00 35.86      A
35 ATOM   1817  CG  ASP A 300      29.228 38.687 24.923  1.00 42.04      A
   ATOM   1818  OD1 ASP A 300      28.450 38.088 24.149  1.00 45.98      A
   ATOM   1819  OD2 ASP A 300      29.666 39.840 24.707  1.00 45.69      A
   ATOM   1820  C   ASP A 300      29.564 35.608 25.363  1.00 29.26      A
   ATOM   1821  O   ASP A 300      29.590 35.299 24.172  1.00 28.64      A
40 ATOM   1822  N   PHE A 301      28.778 35.011 26.253  1.00 28.96      A
   ATOM   1823  CA  PHE A 301      27.884 33.924 25.871  1.00 30.48      A
   ATOM   1824  CB  PHE A 301      27.818 32.854 26.968  1.00 29.17      A
   ATOM   1825  CG  PHE A 301      29.147 32.279 27.356  1.00 29.29      A
   ATOM   1826  CD1 PHE A 301      29.978 32.949 28.245  1.00 27.31      A
45 ATOM   1827  CD2 PHE A 301      29.560 31.050 26.845  1.00 27.89      A
   ATOM   1828  CE1 PHE A 301      31.205 32.403 28.625  1.00 28.83      A
   ATOM   1829  CE2 PHE A 301      30.781 30.498 27.217  1.00 28.05      A
   ATOM   1830  CZ  PHE A 301      31.605 31.175 28.110  1.00 28.27      A
   ATOM   1831  C   PHE A 301      26.459 34.384 25.619  1.00 32.20      A
50 ATOM   1832  O   PHE A 301      25.946 35.261 26.317  1.00 32.36      A
   ATOM   1833  N   PRO A 302      25.798 33.804 24.607  1.00 33.29      A
   ATOM   1834  CD  PRO A 302      26.313 32.943 23.529  1.00 34.04      A
   ATOM   1835  CA  PRO A 302      24.415 34.199 24.341  1.00 35.24      A
   ATOM   1836  CB  PRO A 302      24.144 33.608 22.959  1.00 34.01      A
55 ATOM   1837  CG  PRO A 302      25.041 32.413 22.921  1.00 35.48      A
   ATOM   1838  C   PRO A 302      23.567 33.561 25.444  1.00 37.39      A
   ATOM   1839  O   PRO A 302      23.935 32.518 25.986  1.00 38.49      A
   ATOM   1840  N   ALA A 303      22.447 34.188 25.783  1.00 39.36      A
   ATOM   1841  CA  ALA A 303      21.572 33.692 26.843  1.00 40.65      A
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     ATOM   1842  CB   ALA A 303      20.280  34.506  26.862  1.00 41.66      A
     ATOM   1843  C    ALA A 303      21.238  32.197  26.814  1.00 41.25      A
     ATOM   1844  O    ALA A 303      21.253  31.537  27.854  1.00 43.16      A
     ATOM   1845  N    ALA A 304      20.945  31.665  25.611  1.00 41.04      A
  5  ATOM   1846  CA   ALA A 304      20.569  30.258  25.480  1.00 40.66      A
     ATOM   1847  CB   ALA A 304      20.121  30.004  24.040  1.00 41.36      A
     ATOM   1848  C    ALA A 304      21.628  29.223  25.876  1.00 39.61      A
     ATOM   1849  O    ALA A 304      21.298  28.156  26.395  1.00 40.61      A
     ATOM   1850  N    PHE A 305      22.891  29.543  25.617  1.00 36.21      A
 10  ATOM   1851  CA   PHE A 305      24.022  28.662  25.909  1.00 32.08      A
     ATOM   1852  CB   PHE A 305      25.259  29.519  26.187  1.00 29.46      A
     ATOM   1853  CG   PHE A 305      26.536  28.917  25.690  1.00 28.15      A
     ATOM   1854  CD1  PHE A 305      27.146  27.875  26.377  1.00 26.20      A
     ATOM   1855  CD2  PHE A 305      27.127  29.386  24.521  1.00 27.05      A
 15  ATOM   1856  CE1  PHE A 305      28.330  27.308  25.908  1.00 26.92      A
     ATOM   1857  CE2  PHE A 305      28.312  28.826  24.042  1.00 26.62      A
     ATOM   1858  CZ   PHE A 305      28.914  27.786  24.737  1.00 26.61      A
     ATOM   1859  C    PHE A 305      23.811  27.664  27.057  1.00 30.09      A
     ATOM   1860  O    PHE A 305      23.518  28.051  28.187  1.00 31.51      A
 20  ATOM   1861  N    PHE A 306      23.964  26.378  26.758  1.00 27.01      A
     ATOM   1862  CA   PHE A 306      23.801  25.334  27.769  1.00 26.30      A
     ATOM   1863  CB   PHE A 306      24.157  23.970  27.170  1.00 25.03      A
     ATOM   1864  CG   PHE A 306      23.548  23.725  25.815  1.00 27.24      A
     ATOM   1865  CD1  PHE A 306      22.170  23.831  25.622  1.00 28.40      A
 25  ATOM   1866  CD2  PHE A 306      24.350  23.386  24.728  1.00 27.84      A
     ATOM   1867  CE1  PHE A 306      21.601  23.603  24.365  1.00 28.05      A
     ATOM   1868  CE2  PHE A 306      23.792  23.155  23.465  1.00 28.31      A
     ATOM   1869  CZ   PHE A 306      22.415  23.263  23.283  1.00 28.00      A
     ATOM   1870  C    PHE A 306      24.711  25.652  28.961  1.00 26.23      A
 30  ATOM   1871  O    PHE A 306      25.927  25.775  28.811  1.00 25.59      A
     ATOM   1872  N    PRO A 307      24.125  25.796  30.163  1.00 26.67      A
     ATOM   1873  CD   PRO A 307      22.685  25.625  30.430  1.00 27.95      A
     ATOM   1874  CA   PRO A 307      24.842  26.110  31.405  1.00 26.59      A
     ATOM   1875  CB   PRO A 307      23.795  25.832  32.481  1.00 26.14      A
 35  ATOM   1876  CG   PRO A 307      22.531  26.250  31.803  1.00 27.86      A
     ATOM   1877  C    PRO A 307      26.145  25.355  31.659  1.00 25.58      A
     ATOM   1878  O    PRO A 307      27.189  25.964  31.900  1.00 22.65      A
     ATOM   1879  N    LYS A 308      26.085  24.031  31.620  1.00 24.46      A
     ATOM   1880  CA   LYS A 308      27.274  23.232  31.867  1.00 23.91      A
 40  ATOM   1881  CB   LYS A 308      26.887  21.760  32.024  1.00 23.25      A
     ATOM   1882  CG   LYS A 308      26.062  21.532  33.285  1.00 28.49      A
     ATOM   1883  CD   LYS A 308      25.618  20.093  33.466  1.00 30.17      A
     ATOM   1884  CE   LYS A 308      24.760  19.973  34.722  1.00 33.12      A
     ATOM   1885  NZ   LYS A 308      24.122  18.636  34.860  1.00 34.13      A
 45  ATOM   1886  C    LYS A 308      28.314  23.426  30.769  1.00 22.84      A
     ATOM   1887  O    LYS A 308      29.514  23.411  31.042  1.00 22.46      A
     ATOM   1888  N    ALA A 309      27.861  23.621  29.534  1.00 21.59      A
     ATOM   1889  CA   ALA A 309      28.792  23.848  28.432  1.00 20.02      A
     ATOM   1890  CB   ALA A 309      28.056  23.856  27.106  1.00 18.80      A
 50  ATOM   1891  C    ALA A 309      29.481  25.191  28.662  1.00 21.41      A
     ATOM   1892  O    ALA A 309      30.680  25.335  28.427  1.00 21.39      A
     ATOM   1893  N    ARG A 310      28.717  26.179  29.121  1.00 21.39      A
     ATOM   1894  CA   ARG A 310      29.290  27.494  29.388  1.00 22.02      A
     ATOM   1895  CB   ARG A 310      28.213  28.479  29.854  1.00 22.39      A
 55  ATOM   1896  CG   ARG A 310      28.806  29.756  30.436  1.00 25.30      A
     ATOM   1897  CD   ARG A 310      27.780  30.852  30.664  1.00 28.33      A
     ATOM   1898  NE   ARG A 310      28.420  32.039  31.230  1.00 30.18      A
     ATOM   1899  CZ   ARG A 310      27.901  33.263  31.203  1.00 32.07      A
     ATOM   1900  NH1  ARG A 310      26.719  33.477  30.634  1.00 31.19      A
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      ATOM   1901  NH2 ARG A 310      28.567  34.277  31.742  1.00 30.49      A
      ATOM   1902  C   ARG A 310      30.376  27.388  30.458  1.00 21.65      A
      ATOM   1903  O   ARG A 310      31.464  27.949  30.311  1.00 20.36      A
      ATOM   1904  N   ASP A 311      30.074  26.677  31.541  1.00 19.57      A
  5   ATOM   1905  CA  ASP A 311      31.043  26.512  32.615  1.00 20.18      A
      ATOM   1906  CB  ASP A 311      30.460  25.649  33.739  1.00 20.39      A
      ATOM   1907  CG  ASP A 311      31.439  25.446  34.881  1.00 23.35      A
      ATOM   1908  OD1 ASP A 311      32.158  24.428  34.885  1.00 24.91      A
      ATOM   1909  OD2 ASP A 311      31.500  26.312  35.776  1.00 26.96      A
 10   ATOM   1910  C   ASP A 311      32.322  25.877  32.073  1.00 19.73      A
      ATOM   1911  O   ASP A 311      33.422  26.289  32.439  1.00 19.30      A
      ATOM   1912  N   LEU A 312      32.179  24.891  31.188  1.00 16.32      A
      ATOM   1913  CA  LEU A 312      33.349  24.226  30.611  1.00 16.66      A
      ATOM   1914  CB  LEU A 312      32.927  23.035  29.744  1.00 16.12      A
 15   ATOM   1915  CG  LEU A 312      34.050  22.320  28.974  1.00 14.73      A
      ATOM   1916  CD1 LEU A 312      35.192  21.935  29.912  1.00 14.56      A
      ATOM   1917  CD2 LEU A 312      33.477  21.084  28.289  1.00 14.22      A
      ATOM   1918  C   LEU A 312      34.181  25.189  29.774  1.00 16.61      A
      ATOM   1919  O   LEU A 312      35.402  25.241  29.910  1.00 16.20      A
 20   ATOM   1920  N   VAL A 313      33.515  25.949  28.908  1.00 16.20      A
      ATOM   1921  CA  VAL A 313      34.207  26.907  28.058  1.00 15.37      A
      ATOM   1922  CB  VAL A 313      33.216  27.648  27.130  1.00 16.42      A
      ATOM   1923  CG1 VAL A 313      33.915  28.796  26.426  1.00 16.93      A
      ATOM   1924  CG2 VAL A 313      32.644  26.672  26.103  1.00 17.88      A
 25   ATOM   1925  C   VAL A 313      34.960  27.923  28.911  1.00 17.39      A
      ATOM   1926  O   VAL A 313      36.093  28.294  28.591  1.00 18.00      A
      ATOM   1927  N   GLU A 314      34.342  28.364  30.004  1.00 17.61      A
      ATOM   1928  CA  GLU A 314      34.986  29.331  30.885  1.00 20.43      A
      ATOM   1929  CB  GLU A 314      34.009  29.816  31.959  1.00 22.14      A
 30   ATOM   1930  CG  GLU A 314      32.800  30.550  31.396  1.00 26.52      A
      ATOM   1931  CD  GLU A 314      31.852  31.025  32.478  1.00 31.26      A
      ATOM   1932  OE1 GLU A 314      31.580  30.246  33.417  1.00 33.48      A
      ATOM   1933  OE2 GLU A 314      31.370  32.173  32.387  1.00 34.81      A
      ATOM   1934  C   GLU A 314      36.217  28.721  31.539  1.00 19.15      A
 35   ATOM   1935  O   GLU A 314      37.134  29.433  31.934  1.00 21.47      A
      ATOM   1936  N   LYS A 315      36.245  27.400  31.651  1.00 19.51      A
      ATOM   1937  CA  LYS A 315      37.394  26.749  32.258  1.00 19.17      A
      ATOM   1938  CB  LYS A 315      36.946  25.514  33.043  1.00 18.84      A
      ATOM   1939  CG  LYS A 315      36.280  25.885  34.368  1.00 19.62      A
 40   ATOM   1940  CD  LYS A 315      35.653  24.696  35.073  1.00 19.22      A
      ATOM   1941  CE  LYS   315      35.070  25.095  36.427  0.50 21.00      AC1
      ATOM   1942  NZ  LYS   315      36.119  25.552  37.381  0.50 19.53      AC1
      ATOM   1943  C   LYS A 315      38.452  26.393  31.218  1.00 18.96      A
      ATOM   1944  O   LYS A 315      39.511  25.873  31.561  1.00 19.85      A
 45   ATOM   1945  N   LEU A 316      38.164  26.691  29.950  1.00 17.08      A
      ATOM   1946  CA  LEU A 316      39.102  26.429  28.854  1.00 16.41      A
      ATOM   1947  CB  LEU A 316      38.414  25.636  27.738  1.00 13.81      A
      ATOM   1948  CG  LEU A 316      38.028  24.201  28.115  1.00 14.39      A
      ATOM   1949  CD1 LEU A 316      37.139  23.597  27.031  1.00 12.38      A
 50   ATOM   1950  CD2 LEU A 316      39.302  23.373  28.309  1.00 12.77      A
      ATOM   1951  C   LEU A 316      39.652  27.743  28.290  1.00 17.12      A
      ATOM   1952  O   LEU A 316      40.851  27.860  28.023  1.00 16.53      A
      ATOM   1953  N   LEU A 317      38.780  28.729  28.105  1.00 16.27      A
      ATOM   1954  CA  LEU A 317      39.228  30.022  27.596  1.00 17.52      A
 55   ATOM   1955  CB  LEU A 317      38.083  30.752  26.887  1.00 16.37      A
      ATOM   1956  CG  LEU A 317      37.448  29.973  25.727  1.00 18.81      A
      ATOM   1957  CD1 LEU A 317      36.415  30.851  25.018  1.00 16.47      A
      ATOM   1958  CD2 LEU A 317      38.528  29.526  24.741  1.00 17.87      A
      ATOM   1959  C   LEU A 317      39.745  30.841  28.774  1.00 18.27      A
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      ATOM   1960  O    LEU A 317      39.078  31.753  29.273  1.00 18.58      A
      ATOM   1961  N    VAL A 318      40.937  30.475  29.229  1.00 18.02      A
      ATOM   1962  CA   VAL A 318      41.593  31.141  30.342  1.00 18.85      A
      ATOM   1963  CB   VAL A 318      41.846  30.153  31.500  1.00 19.91      A
 5    ATOM   1964  CG1  VAL A 318      42.590  30.848  32.634  1.00 20.01      A
      ATOM   1965  CG2  VAL A 318      40.520  29.584  31.990  1.00 19.44      A
      ATOM   1966  C    VAL A 318      42.923  31.657  29.811  1.00 19.67      A
      ATOM   1967  O    VAL A 318      43.690  30.902  29.208  1.00 18.26      A
      ATOM   1968  N    LEU A 319      43.197  32.939  30.028  1.00 20.07      A
10    ATOM   1969  CA   LEU A 319      44.436  33.533  29.538  1.00 20.98      A
      ATOM   1970  CB   LEU A 319      44.521  35.002  29.968  1.00 21.64      A
      ATOM   1971  CG   LEU A 319      43.418  35.908  29.408  1.00 24.38      A
      ATOM   1972  CD1  LEU A 319      43.606  37.332  29.935  1.00 23.28      A
      ATOM   1973  CD2  LEU A 319      43.453  35.887  27.875  1.00 24.33      A
15    ATOM   1974  C    LEU A 319      45.680  32.774  29.994  1.00 20.38      A
      ATOM   1975  O    LEU A 319      46.568  32.496  29.192  1.00 21.34      A
      ATOM   1976  N    ASP A 320      45.742  32.440  31.280  1.00 20.22      A
      ATOM   1977  CA   ASP A 320      46.879  31.707  31.833  1.00 20.90      A
      ATOM   1978  CB   ASP A 320      46.842  31.760  33.365  1.00 20.76      A
20    ATOM   1979  CG   ASP A 320      48.049  31.102  34.004  1.00 21.51      A
      ATOM   1980  OD1  ASP A 320      48.669  30.226  33.367  1.00 23.46      A
      ATOM   1981  OD2  ASP A 320      48.371  31.450  35.159  1.00 23.89      A
      ATOM   1982  C    ASP A 320      46.814  30.247  31.367  1.00 20.06      A
      ATOM   1983  O    ASP A 320      45.988  29.476  31.840  1.00 20.54      A
25    ATOM   1984  N    ALA A 321      47.700  29.876  30.451  1.00 20.68      A
      ATOM   1985  CA   ALA A 321      47.733  28.522  29.903  1.00 22.04      A
      ATOM   1986  CB   ALA A 321      48.860  28.411  28.881  1.00 20.75      A
      ATOM   1987  C    ALA A 321      47.858  27.400  30.940  1.00 21.62      A
      ATOM   1988  O    ALA A 321      47.482  26.259  30.665  1.00 21.99      A
30    ATOM   1989  N    THR A 322      48.732  27.715  32.127  1.00 20.89      A
      ATOM   1990  CA   THR A 322      48.531  26.698  33.167  1.00 20.82      A
      ATOM   1991  CB   THR A 322      49.670  27.051  34.146  1.00 19.47      A
      ATOM   1992  OG1  THR A 322      49.341  28.253  34.848  1.00 20.19      A
      ATOM   1993  CG2  THR A 322      50.981  27.249  33.394  1.00 21.59      A
35    ATOM   1994  C    THR A 322      47.264  26.498  33.983  1.00 19.55      A
      ATOM   1995  O    THR A 322      47.235  25.673  34.894  1.00 21.13      A
      ATOM   1996  N    LYS A 323      46.216  27.248  33.661  1.00 19.33      A
      ATOM   1997  CA   LYS A 323      44.962  27.122  34.392  1.00 21.20      A
      ATOM   1998  CB   LYS A 323      44.580  28.460  35.030  1.00 23.75      A
40    ATOM   1999  CG   LYS A 323      45.562  28.933  36.084  1.00 28.45      A
      ATOM   2000  CD   LYS A 323      45.055  30.177  36.799  1.00 33.76      A
      ATOM   2001  CE   LYS A 323      46.087  30.678  37.802  1.00 36.15      A
      ATOM   2002  NZ   LYS A 323      46.532  29.569  38.693  1.00 37.34      A
      ATOM   2003  C    LYS A 323      43.806  26.614  33.539  1.00 20.68      A
45    ATOM   2004  O    LYS A 323      42.649  26.757  33.915  1.00 20.42      A
      ATOM   2005  N    ARG A 324      44.114  26.019  32.392  1.00 19.97      A
      ATOM   2006  CA   ARG A 324      43.060  25.494  31.531  1.00 17.98      A
      ATOM   2007  CB   ARG A 324      43.461  25.609  30.061  1.00 15.95      A
      ATOM   2008  CG   ARG A 324      43.534  27.050  29.603  1.00 17.34      A
50    ATOM   2009  CD   ARG A 324      43.996  27.194  28.172  1.00 19.80      A
      ATOM   2010  NE   ARG A 324      44.438  28.565  27.944  1.00 16.93      A
      ATOM   2011  CZ   ARG A 324      45.410  28.908  27.108  1.00 19.88      A
      ATOM   2012  NH1  ARG A 324      46.045  27.978  26.398  1.00 14.58      A
      ATOM   2013  NH2  ARG A 324      45.774  30.181  27.015  1.00 16.51      A
55    ATOM   2014  C    ARG A 324      42.762  24.046  31.883  1.00 18.32      A
      ATOM   2015  O    ARG A 324      43.673  23.222  32.006  1.00 18.20      A
      ATOM   2016  N    LEU A 325      41.479  23.748  32.055  1.00 18.32      A
      ATOM   2017  CA   LEU A 325      41.050  22.403  32.395  1.00 17.79      A
      ATOM   2018  CB   LEU A 325      39.523  22.335  32.425  1.00 17.03      A
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      ATOM   2019   CG  LEU A 325   38.896  21.125  33.116  1.00 15.91      A
      ATOM   2020   CD1 LEU A 325   39.392  21.048  34.557  1.00 15.93      A
      ATOM   2021   CD2 LEU A 325   37.375  21.255  33.084  1.00 16.56      A
      ATOM   2022   C   LEU A 325   41.599  21.433  31.356  1.00 18.68      A
  5   ATOM   2023   O   LEU A 325   41.347  21.586  30.157  1.00 18.28      A
      ATOM   2024   N   GLY A 326   42.354  20.439  31.821  1.00 18.18      A
      ATOM   2025   CA  GLY A 326   42.931  19.462  30.915  1.00 16.36      A
      ATOM   2026   C   GLY A 326   44.443  19.558  30.807  1.00 19.15      A
      ATOM   2027   O   GLY A 326   45.093  18.592  30.404  1.00 19.52      A
 10   ATOM   2028   N   CYS A 327   45.016  20.708  31.161  1.00 18.16      A
      ATOM   2029   CA  CYS A 327   46.463  20.867  31.075  1.00 19.30      A
      ATOM   2030   CB  CYS A 327   46.856  22.350  31.058  1.00 20.22      A
      ATOM   2031   SG  CYS A 327   46.782  23.200  32.649  1.00 21.97      A
      ATOM   2032   C   CYS A 327   47.169  20.157  32.228  1.00 20.22      A
 15   ATOM   2033   O   CYS A 327   46.561  19.828  33.246  1.00 17.92      A
      ATOM   2034   N   GLU A 328   48.463  19.933  32.053  1.00 20.51      A
      ATOM   2035   CA  GLU A 328   49.274  19.244  33.042  1.00 23.34      A
      ATOM   2036   CB  GLU A 328   50.710  19.139  32.507  1.00 28.68      A
      ATOM   2037   CG  GLU A 328   50.754  18.367  31.175  1.00 38.24      A
 20   ATOM   2038   CD  GLU A 328   52.067  18.500  30.414  1.00 43.23      A
      ATOM   2039   OE1 GLU A 328   52.535  19.643  30.218  1.00 46.22      A
      ATOM   2040   OE2 GLU A 328   52.618  17.459  29.991  1.00 44.90      A
      ATOM   2041   C   GLU A 328   49.234  19.876  34.435  1.00 22.11      A
      ATOM   2042   O   GLU A 328   49.147  19.161  35.437  1.00 20.27      A
 25   ATOM   2043   N   GLU A 329   49.276  21.204  34.506  1.00 18.40      A
      ATOM   2044   CA  GLU A 329   49.248  21.875  35.801  1.00 20.13      A
      ATOM   2045   CB  GLU A 329   49.587  23.363  35.657  1.00 20.36      A
      ATOM   2046   CG  GLU A 329   51.014  23.651  35.190  1.00 24.05      A
      ATOM   2047   CD  GLU A 329   51.191  23.518  33.688  1.00 25.93      A
 30   ATOM   2048   OE1 GLU A 329   50.213  23.154  32.995  1.00 26.61      A
      ATOM   2049   OE2 GLU A 329   52.311  23.781  33.198  1.00 27.19      A
      ATOM   2050   C   GLU A 329   47.890  21.718  36.480  1.00 19.36      A
      ATOM   2051   O   GLU A 329   47.775  21.879  37.694  1.00 18.74      A
      ATOM   2052   N   MET A 330   46.863  21.415  35.691  1.00 17.28      A
 35   ATOM   2053   CA  MET A 330   45.520  21.220  36.229  1.00 16.38      A
      ATOM   2054   CB  MET A 330   44.474  21.833  35.294  1.00 17.65      A
      ATOM   2055   CG  MET A 330   44.460  23.365  35.311  1.00 22.95      A
      ATOM   2056   SD  MET A 330   44.186  24.026  36.979  1.00 26.78      A
      ATOM   2057   CE  MET A 330   42.435  23.712  37.186  1.00 24.69      A
 40   ATOM   2058   C   MET A 330   45.257  19.730  36.422  1.00 14.30      A
      ATOM   2059   O   MET A 330   44.127  19.304  36.629  1.00 15.39      A
      ATOM   2060   N   GLU A 331   46.327  18.949  36.346  1.00 15.60      A
      ATOM   2061   CA  GLU A 331   46.289  17.501  36.531  1.00 17.08      A
      ATOM   2062   CB  GLU A 331   45.607  17.155  37.862  1.00 17.00      A
 45   ATOM   2063   CG  GLU A 331   46.070  18.027  39.038  1.00 17.46      A
      ATOM   2064   CD  GLU A 331   47.591  18.179  39.145  1.00 20.16      A
      ATOM   2065   OE1 GLU A 331   48.034  19.073  39.896  1.00 21.39      A
      ATOM   2066   OE2 GLU A 331   48.345  17.420  38.500  1.00 18.87      A
      ATOM   2067   C   GLU A 331   45.697  16.658  35.398  1.00 17.80      A
 50   ATOM   2068   O   GLU A 331   45.107  15.602  35.636  1.00 20.40      A
      ATOM   2069   N   GLY A 332   45.844  17.133  34.167  1.00 16.23      A
      ATOM   2070   CA  GLY A 332   45.420  16.353  33.015  1.00 14.10      A
      ATOM   2071   C   GLY A 332   43.982  16.154  32.596  1.00 13.54      A
      ATOM   2072   O   GLY A 332   43.063  16.864  33.017  1.00 11.96      A
 55   ATOM   2073   N   TYR A 333   43.804  15.141  31.750  1.00 14.37      A
      ATOM   2074   CA  TYR A 333   42.510  14.806  31.182  1.00 13.56      A
      ATOM   2075   CB  TYR A 333   42.722  13.892  29.968  1.00 15.00      A
      ATOM   2076   CG  TYR A 333   43.153  14.683  28.752  1.00 16.46      A
      ATOM   2077   CD1 TYR A 333   42.206  15.172  27.849  1.00 15.29      A
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     ATOM  2078  CE1 TYR A 333    42.573  16.002  26.794  1.00 13.42      A
     ATOM  2079  CD2 TYR A 333    44.490  15.039  28.561  1.00 14.91      A
     ATOM  2080  CE2 TYR A 333    44.872  15.877  27.499  1.00 14.87      A
     ATOM  2081  CZ  TYR A 333    43.902  16.353  26.626  1.00 15.61      A
  5  ATOM  2082  OH  TYR A 333    44.244  17.197  25.599  1.00 17.29      A
     ATOM  2083  C   TYR A 333    41.470  14.230  32.127  1.00 15.23      A
     ATOM  2084  O   TYR A 333    40.278  14.323  31.846  1.00 16.63      A
     ATOM  2085  N   GLY A 334    41.907  13.650  33.244  1.00 15.50      A
     ATOM  2086  CA  GLY A 334    40.957  13.100  34.202  1.00 15.07      A
 10  ATOM  2087  C   GLY A 334    39.925  14.146  34.616  1.00 16.40      A
     ATOM  2088  O   GLY A 334    38.724  13.946  34.433  1.00 15.05      A
     ATOM  2089  N   PRO A 335    40.366  15.278  35.184  1.00 14.96      A
     ATOM  2090  CD  PRO A 335    41.727  15.531  35.689  1.00 15.88      A
     ATOM  2091  CA  PRO A 335    39.444  16.339  35.606  1.00 15.29      A
 15  ATOM  2092  CB  PRO A 335    40.383  17.397  36.178  1.00 13.19      A
     ATOM  2093  CG  PRO A 335    41.485  16.569  36.758  1.00 13.81      A
     ATOM  2094  C   PRO A 335    38.594  16.877  34.448  1.00 15.84      A
     ATOM  2095  O   PRO A 335    37.423  17.204  34.631  1.00 14.84      A
     ATOM  2096  N   LEU A 336    39.184  16.971  33.257  1.00 16.12      A
 20  ATOM  2097  CA  LEU A 336    38.450  17.465  32.094  1.00 15.52      A
     ATOM  2098  CB  LEU A 336    39.396  17.653  30.898  1.00 14.39      A
     ATOM  2099  CG  LEU A 336    38.770  17.991  29.538  1.00 15.46      A
     ATOM  2100  CD1 LEU A 336    37.836  19.182  29.662  1.00 11.25      A
     ATOM  2101  CD2 LEU A 336    39.884  18.285  28.528  1.00 14.11      A
 25  ATOM  2102  C   LEU A 336    37.321  16.508  31.714  1.00 16.28      A
     ATOM  2103  O   LEU A 336    36.176  16.921  31.540  1.00 15.51      A
     ATOM  2104  N   LYS A 337    37.640  15.225  31.592  1.00 17.22      A
     ATOM  2105  CA  LYS A 337    36.624  14.243  31.235  1.00 17.39      A
     ATOM  2106  CB  LYS A 337    37.293  12.900  30.921  1.00 17.68      A
 30  ATOM  2107  CG  LYS A 337    38.170  12.994  29.676  1.00 22.31      A
     ATOM  2108  CD  LYS A 337    39.213  11.892  29.592  1.00 24.60      A
     ATOM  2109  CE  LYS A 337    38.620  10.560  29.189  1.00 24.76      A
     ATOM  2110  NZ  LYS A 337    39.710   9.560  28.997  1.00 25.05      A
     ATOM  2111  C   LYS A 337    35.577  14.096  32.342  1.00 17.33      A
 35  ATOM  2112  O   LYS A 337    34.456  13.652  32.090  1.00 14.42      A
     ATOM  2113  N   ALA A 338    35.928  14.500  33.559  1.00 15.83      A
     ATOM  2114  CA  ALA A 338    34.989  14.395  34.674  1.00 17.52      A
     ATOM  2115  CB  ALA A 338    35.749  14.167  35.980  1.00 19.68      A
     ATOM  2116  C   ALA A 338    34.095  15.621  34.804  1.00 18.83      A
 40  ATOM  2117  O   ALA A 338    33.252  15.687  35.695  1.00 18.94      A
     ATOM  2118  N   HIS A 339    34.262  16.596  33.918  1.00 19.42      A
     ATOM  2119  CA  HIS A 339    33.438  17.796  34.004  1.00 19.28      A
     ATOM  2120  CB  HIS A 339    33.865  18.819  32.949  1.00 19.20      A
     ATOM  2121  CG  HIS A 339    33.163  20.134  33.074  1.00 20.26      A
 45  ATOM  2122  CD2 HIS A 339    33.549  21.299  33.649  1.00 18.95      A
     ATOM  2123  ND1 HIS A 339    31.880  20.340  32.612  1.00 19.10      A
     ATOM  2124  CE1 HIS A 339    31.506  21.576  32.896  1.00 22.19      A
     ATOM  2125  NE2 HIS A 339    32.500  22.179  33.525  1.00 21.98      A
     ATOM  2126  C   HIS A 339    31.957  17.448  33.845  1.00 19.13      A
 50  ATOM  2127  O   HIS A 339    31.597  16.576  33.061  1.00 19.52      A
     ATOM  2128  N   PRO A 340    31.079  18.125  34.606  1.00 19.80      A
     ATOM  2129  CD  PRO A 340    31.424  19.119  35.640  1.00 19.08      A
     ATOM  2130  CA  PRO A 340    29.630  17.900  34.569  1.00 20.52      A
     ATOM  2131  CB  PRO A 340    29.091  19.058  35.396  1.00 20.74      A
 55  ATOM  2132  CG  PRO A 340    30.146  19.207  36.454  1.00 19.20      A
     ATOM  2133  C   PRO A 340    29.000  17.834  33.176  1.00 21.42      A
     ATOM  2134  O   PRO A 340    28.049  17.088  32.955  1.00 22.48      A
     ATOM  2135  N   PHE A 341    29.528  18.606  32.237  1.00 21.33      A
     ATOM  2136  CA  PHE A 341    28.985  18.610  30.886  1.00 21.57      A
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     ATOM   2137   CB    PHE A 341      29.739  19.624  30.017  1.00 21.64       A
     ATOM   2138   CG    PHE A 341      29.207  19.740  28.613  1.00 23.18       A
     ATOM   2139   CD1   PHE A 341      27.903  20.171  28.382  1.00 22.58       A
     ATOM   2140   CD2   PHE A 341      30.013  19.431  27.522  1.00 21.95       A
  5  ATOM   2141   CE1   PHE A 341      27.410  20.292  27.082  1.00 23.54       A
     ATOM   2142   CE2   PHE A 341      29.533  19.548  26.220  1.00 21.83       A
     ATOM   2143   CZ    PHE A 341      28.228  19.980  25.998  1.00 23.23       A
     ATOM   2144   C     PHE A 341      29.055  17.226  30.237  1.00 21.84       A
     ATOM   2145   O     PHE A 341      28.232  16.896  29.389  1.00 20.37       A
 10  ATOM   2146   N     PHE A 342      30.034  16.422  30.640  1.00 20.51       A
     ATOM   2147   CA    PHE A 342      30.221  15.085  30.077  1.00 23.01       A
     ATOM   2148   CB    PHE A 342      31.710  14.809  29.850  1.00 18.00       A
     ATOM   2149   CG    PHE A 342      32.398  15.812  28.971  1.00 17.05       A
     ATOM   2150   CD1   PHE A 342      32.010  15.987  27.652  1.00 17.78       A
 15  ATOM   2151   CD2   PHE A 342      33.487  16.534  29.450  1.00 15.72       A
     ATOM   2152   CE1   PHE A 342      32.702  16.867  26.811  1.00 18.08       A
     ATOM   2153   CE2   PHE A 342      34.184  17.414  28.617  1.00 17.45       A
     ATOM   2154   CZ    PHE A 342      33.790  17.578  27.298  1.00 16.56       A
     ATOM   2155   C     PHE A 342      29.679  13.972  30.976  1.00 24.95       A
 20  ATOM   2156   O     PHE A 342      30.002  12.798  30.777  1.00 23.95       A
     ATOM   2157   N     GLU A 343      28.861  14.333  31.958  1.00 27.35       A
     ATOM   2158   CA    GLU A 343      28.325  13.349  32.897  1.00 30.28       A
     ATOM   2159   CB    GLU A 343      27.187  13.964  33.716  1.00 32.20       A
     ATOM   2160   CG    GLU A 343      26.581  12.991  34.714  1.00 39.71       A
 25  ATOM   2161   CD    GLU A 343      25.628  13.661  35.688  1.00 44.72       A
     ATOM   2162   OE1   GLU A 343      24.661  14.314  35.234  1.00 47.55       A
     ATOM   2163   OE2   GLU A 343      25.847  13.526  36.911  1.00 46.89       A
     ATOM   2164   C     GLU A 343      27.852  12.017  32.305  1.00 28.98       A
     ATOM   2165   O     GLU A 343      28.225  10.952  32.800  1.00 31.73       A
 30  ATOM   2166   N     SER A 344      27.037  12.067  31.258  1.00 26.09       A
     ATOM   2167   CA    SER A 344      26.520  10.838  30.656  1.00 28.36       A
     ATOM   2168   CB    SER A 344      25.129  11.089  30.067  1.00 28.73       A
     ATOM   2169   OG    SER A 344      25.203  11.942  28.940  1.00 30.91       A
     ATOM   2170   C     SER A 344      27.407  10.214  29.577  1.00 27.66       A
 35  ATOM   2171   O     SER A 344      26.987   9.281  28.900  1.00 28.66       A
     ATOM   2172   N     VAL A 345      28.627  10.715  29.419  1.00 26.75       A
     ATOM   2173   CA    VAL A 345      29.534  10.183  28.402  1.00 23.44       A
     ATOM   2174   CB    VAL A 345      30.565  11.256  27.950  1.00 23.10       A
     ATOM   2175   CG1   VAL A 345      31.589  10.631  26.995  1.00 22.24       A
 40  ATOM   2176   CG2   VAL A 345      29.854  12.418  27.275  1.00 20.05       A
     ATOM   2177   C     VAL A 345      30.326   8.957  28.855  1.00 24.26       A
     ATOM   2178   O     VAL A 345      30.876   8.930  29.960  1.00 22.83       A
     ATOM   2179   N     THR A 346      30.374   7.942  27.997  1.00 21.77       A
     ATOM   2180   CA    THR A 346      31.153   6.740  28.272  1.00 23.70       A
 45  ATOM   2181   CB    THR A 346      30.391   5.455  27.857  1.00 26.53       A
     ATOM   2182   OG1   THR A 346      29.248   5.284  28.706  1.00 29.98       A
     ATOM   2183   CG2   THR A 346      31.289   4.231  27.990  1.00 24.28       A
     ATOM   2184   C     THR A 346      32.383   6.945  27.385  1.00 23.43       A
     ATOM   2185   O     THR A 346      32.306   6.827  26.160  1.00 24.50       A
 50  ATOM   2186   N     TRP A 347      33.508   7.270  28.013  1.00 22.98       A
     ATOM   2187   CA    TRP A 347      34.744   7.569  27.300  1.00 23.81       A
     ATOM   2188   CB    TRP A 347      35.683   8.352  28.219  1.00 22.54       A
     ATOM   2189   CG    TRP A 347      35.128   9.658  28.693  1.00 20.61       A
     ATOM   2190   CD2   TRP A 347      35.257  10.927  28.040  1.00 19.11       A
 55  ATOM   2191   CE2   TRP A 347      34.581  11.881  28.838  1.00 18.39       A
     ATOM   2192   CE3   TRP A 347      35.878  11.351  26.858  1.00 18.16       A
     ATOM   2193   CD1   TRP A 347      34.397   9.883  29.828  1.00 18.35       A
     ATOM   2194   NE1   TRP A 347      34.065  11.218  29.923  1.00 19.51       A
     ATOM   2195   CZ2   TRP A 347      34.510  13.234  28.491  1.00 16.88       A
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      ATOM   2196  CZ3 TRP A 347      35.808  12.701  26.511  1.00 17.23      A
      ATOM   2197  CH2 TRP A 347      35.127  13.624  27.327  1.00 18.16      A
      ATOM   2198  C   TRP A 347      35.538   6.429  26.675  1.00 25.79      A
      ATOM   2199  O   TRP A 347      36.304   6.654  25.742  1.00 24.67      A
 5    ATOM   2200  N   ALA A 348      35.360   5.215  27.183  1.00 27.10      A
      ATOM   2201  CA  ALA A 348      36.116   4.063  26.697  1.00 27.46      A
      ATOM   2202  CB  ALA A 348      35.899   2.869  27.636  1.00 27.09      A
      ATOM   2203  C   ALA A 348      35.895   3.620  25.256  1.00 27.18      A
      ATOM   2204  O   ALA A 348      36.830   3.148  24.613  1.00 29.41      A
10    ATOM   2205  N   ASN A 349      34.682   3.769  24.735  1.00 26.55      A
      ATOM   2206  CA  ASN A 349      34.418   3.310  23.375  1.00 27.28      A
      ATOM   2207  CB  ASN A 349      33.700   1.962  23.444  1.00 29.37      A
      ATOM   2208  CG  ASN A 349      32.299   2.088  24.013  1.00 30.92      A
      ATOM   2209  OD1 ASN A 349      32.045   2.942  24.859  1.00 30.17      A
15    ATOM   2210  ND2 ASN A 349      31.386   1.237  23.553  1.00 33.52      A
      ATOM   2211  C   ASN A 349      33.599   4.265  22.509  1.00 26.47      A
      ATOM   2212  O   ASN A 349      32.669   3.843  21.819  1.00 25.87      A
      ATOM   2213  N   LEU A 350      33.947   5.543  22.518  1.00 24.45      A
      ATOM   2214  CA  LEU A 350      33.203   6.510  21.721  1.00 23.14      A
20    ATOM   2215  CB  LEU A 350      33.837   7.898  21.848  1.00 23.22      A
      ATOM   2216  CG  LEU A 350      33.659   8.605  23.191  1.00 21.05      A
      ATOM   2217  CD1 LEU A 350      34.646   9.756  23.293  1.00 19.36      A
      ATOM   2218  CD2 LEU A 350      32.220   9.094  23.319  1.00 18.78      A
      ATOM   2219  C   LEU A 350      33.082   6.152  20.240  1.00 22.60      A
25    ATOM   2220  O   LEU A 350      32.011   6.296  19.650  1.00 21.15      A
      ATOM   2221  N   HIS A 351      34.165   5.689  19.627  1.00 23.13      A
      ATOM   2222  CA  HIS A 351      34.089   5.387  18.204  1.00 27.83      A
      ATOM   2223  CB  HIS A 351      35.506   5.325  17.596  1.00 29.36      A
      ATOM   2224  CG  HIS A 351      36.082   3.950  17.493  1.00 32.07      A
30    ATOM   2225  CD2 HIS A 351      36.611   3.128  18.431  1.00 32.39      A
      ATOM   2226  ND1 HIS A 351      36.197   3.285  16.291  1.00 33.02      A
      ATOM   2227  CE1 HIS A 351      36.775   2.113  16.493  1.00 33.58      A
      ATOM   2228  NE2 HIS A 351      37.036   1.992  17.782  1.00 31.76      A
      ATOM   2229  C   HIS A 351      33.258   4.144  17.874  1.00 28.12      A
35    ATOM   2230  O   HIS A 351      33.015   3.847  16.707  1.00 29.49      A
      ATOM   2231  N   GLN A 352      32.800   3.442  18.908  1.00 29.28      A
      ATOM   2232  CA  GLN A 352      31.963   2.255  18.726  1.00 29.67      A
      ATOM   2233  CB  GLN   352      32.366   1.145  19.694  0.50 30.56      AC1
      ATOM   2234  CG  GLN   352      33.169   0.041  19.041  0.50 30.88      AC1
40    ATOM   2235  CD  GLN   352      34.493  -0.186  19.729  0.50 31.21      AC1
      ATOM   2236  OE1 GLN   352      34.541  -0.450  20.928  0.50 30.76      AC1
      ATOM   2237  NE2 GLN   352      35.578  -0.084  18.971  0.50 32.30      AC1
      ATOM   2238  C   GLN A 352      30.504   2.638  18.963  1.00 30.42      A
      ATOM   2239  O   GLN A 352      29.595   1.831  18.770  1.00 29.01      A
45    ATOM   2240  N   GLN A 353      30.290   3.875  19.397  1.00 27.64      A
      ATOM   2241  CA  GLN A 353      28.948   4.365  19.652  1.00 27.42      A
      ATOM   2242  CB  GLN A 353      28.977   5.401  20.775  1.00 25.77      A
      ATOM   2243  CG  GLN A 353      29.408   4.837  22.115  1.00 27.34      A
      ATOM   2244  CD  GLN A 353      29.638   5.914  23.156  1.00 27.19      A
50    ATOM   2245  OE1 GLN A 353      28.875   6.872  23.252  1.00 28.29      A
      ATOM   2246  NE2 GLN A 353      30.687   5.753  23.951  1.00 28.79      A
      ATOM   2247  C   GLN A 353      28.375   4.989  18.385  1.00 29.00      A
      ATOM   2248  O   GLN A 353      29.118   5.455  17.516  1.00 29.14      A
      ATOM   2249  N   THR A 354      27.053   4.984  18.276  1.00 27.31      A
55    ATOM   2250  CA  THR A 354      26.390   5.568  17.119  1.00 27.85      A
      ATOM   2251  CB  THR A 354      24.991   4.941  16.904  1.00 30.69      A
      ATOM   2252  OG1 THR A 354      25.132   3.532  16.665  1.00 30.07      A
      ATOM   2253  CG2 THR A 354      24.289   5.585  15.709  1.00 29.58      A
      ATOM   2254  C   THR A 354      26.244   7.062  17.376  1.00 26.85      A
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	ATOM	2255	O	THR	A	354	25.592	7.475	18.329	1.00 25.77	A
	ATOM	2256	N	PRO	A	355	26.867	7.898	16.533	1.00 27.22	A
	ATOM	2257	CD	PRO	A	355	27.792	7.588	15.431	1.00 25.89	A
	ATOM	2258	CA	PRO	A	355	26.763	9.346	16.734	1.00 27.23	A
5	ATOM	2259	CB	PRO	A	355	27.625	9.915	15.609	1.00 24.91	A
	ATOM	2260	CG	PRO	A	355	28.643	8.838	15.385	1.00 25.54	A
	ATOM	2261	C	PRO	A	355	25.322	9.837	16.641	1.00 28.07	A
	ATOM	2262	O	PRO	A	355	24.548	9.364	15.810	1.00 27.24	A
	ATOM	2263	N	PRO	A	356	24.941	10.792	17.500	1.00 28.28	A
10	ATOM	2264	CD	PRO	A	356	25.752	11.560	18.462	1.00 28.31	A
	ATOM	2265	CA	PRO	A	356	23.572	11.306	17.448	1.00 28.44	A
	ATOM	2266	CB	PRO	A	356	23.539	12.301	18.604	1.00 28.11	A
	ATOM	2267	CG	PRO	A	356	24.946	12.832	18.612	1.00 26.86	A
	ATOM	2268	C	PRO	A	356	23.363	11.978	16.097	1.00 29.25	A
15	ATOM	2269	O	PRO	A	356	24.304	12.537	15.529	1.00 27.27	A
	ATOM	2270	N	ALA	A	357	22.143	11.910	15.575	1.00 30.45	A
	ATOM	2271	CA	ALA	A	357	21.848	12.521	14.287	1.00 32.81	A
	ATOM	2272	CB	ALA	A	357	20.507	12.019	13.757	1.00 31.99	A
	ATOM	2273	C	ALA	A	357	21.824	14.035	14.448	1.00 35.05	A
20	ATOM	2274	O	ALA	A	357	21.194	14.561	15.369	1.00 35.04	A
	ATOM	2275	N	LEU	A	358	22.516	14.730	13.552	1.00 37.81	A
	ATOM	2276	CA	LEU	A	358	22.578	16.185	13.597	1.00 42.15	A
	ATOM	2277	CB	LEU	A	358	23.679	16.681	12.658	1.00 39.54	A
	ATOM	2278	CG	LEU	A	358	25.086	16.285	13.109	1.00 39.51	A
25	ATOM	2279	CD1	LEU	A	358	26.102	16.686	12.062	1.00 39.29	A
	ATOM	2280	CD2	LEU	A	358	25.395	16.953	14.445	1.00 40.01	A
	ATOM	2281	C	LEU	A	358	21.241	16.837	13.242	1.00 45.91	A
	ATOM	2282	O	LEU	A	358	20.874	16.927	12.069	1.00 45.71	A
	ATOM	2283	N	THR	A	359	20.530	17.290	14.275	1.00 50.06	A
30	ATOM	2284	CA	THR	A	359	19.223	17.939	14.140	1.00 53.73	A
	ATOM	2285	CB	THR	A	359	19.353	19.428	13.726	1.00 54.04	A
	ATOM	2286	OG1	THR	A	359	19.995	19.521	12.448	1.00 56.35	A
	ATOM	2287	CG2	THR	A	359	20.158	20.204	14.763	1.00 54.32	A
	ATOM	2288	C	THR	A	359	18.309	17.236	13.139	1.00 54.47	A
35	ATOM	2289	O	THR	A	359	18.483	16.016	12.930	1.00 55.90	A
	ATOM	2290	OXT	THR	A	359	17.407	17.908	12.595	1.00 56.97	A
	ATOM	2291	OH2	TIP	S	1	42.566	19.118	34.302	1.00 15.09	S
	ATOM	2292	OH2	TIP	S	2	41.052	32.378	19.857	1.00 15.82	S
	ATOM	2293	OH2	TIP	S	3	37.014	33.030	17.747	1.00 16.95	S
40	ATOM	2294	OH2	TIP	S	5	45.353	24.370	18.152	1.00 16.85	S
	ATOM	2295	OH2	TIP	S	6	31.896	13.930	33.235	1.00 20.42	S
	ATOM	2296	OH2	TIP	S	7	50.351	22.781	28.249	1.00 21.14	S
	ATOM	2297	OH2	TIP	S	8	45.246	-0.589	-0.734	1.00 17.74	S
	ATOM	2298	OH2	TIP	S	11	46.249	-0.348	-8.523	1.00 21.32	S
45	ATOM	2299	OH2	TIP	S	14	45.756	11.148	29.680	1.00 21.94	S
	ATOM	2300	OH2	TIP	S	15	44.273	13.157	34.592	1.00 15.61	S
	ATOM	2301	OH2	TIP	S	17	53.598	3.722	-1.720	1.00 21.45	S
	ATOM	2302	OH2	TIP	S	18	46.049	13.087	31.565	1.00 20.35	S
	ATOM	2303	OH2	TIP	S	19	53.422	22.401	-3.280	1.00 23.26	S
50	ATOM	2304	OH2	TIP	S	20	34.587	7.922	5.383	1.00 22.58	S
	ATOM	2305	OH2	TIP	S	21	45.053	27.379	19.376	1.00 29.60	S
	ATOM	2306	OH2	TIP	S	23	28.899	36.416	28.633	1.00 31.68	S
	ATOM	2307	OH2	TIP	S	24	35.531	11.645	-8.219	1.00 23.45	S
	ATOM	2308	OH2	TIP	S	25	47.364	28.787	19.612	1.00 23.03	S
55	ATOM	2309	OH2	TIP	S	27	48.859	21.588	12.634	1.00 23.76	S
	ATOM	2310	OH2	TIP	S	29	48.805	8.920	23.626	1.00 22.23	S
	ATOM	2311	OH2	TIP	S	31	48.619	7.247	10.112	1.00 21.32	S
	ATOM	2312	OH2	TIP	S	34	44.824	28.720	15.621	1.00 25.27	S
	ATOM	2313	OH2	TIP	S	35	26.030	12.634	13.407	1.00 21.61	S

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      ATOM   2314  OH2 TIP S   36      50.462  19.810  40.066  1.00 25.45      S
      ATOM   2315  OH2 TIP S   37      39.631  23.510  -0.239  1.00 30.88      S
      ATOM   2316  OH2 TIP S   40      44.734  42.655  10.346  1.00 30.84      S
      ATOM   2317  OH2 TIP S   41      54.653   3.902   1.503  1.00 27.14      S
    5 ATOM   2318  OH2 TIP S   45      45.693  21.923  39.754  1.00 28.30      S
      ATOM   2319  OH2 TIP S   47      47.820  16.413   7.805  1.00 25.73      S
      ATOM   2320  OH2 TIP S   48      50.292  31.412  29.642  1.00 32.79      S
      ATOM   2321  OH2 TIP S   49      26.056  16.646  34.827  1.00 29.80      S
      ATOM   2322  OH2 TIP S   52      31.714  10.996  31.855  1.00 29.15      S
   10 ATOM   2323  OH2 TIP S   53      46.108  23.843  -4.299  1.00 24.21      S
      ATOM   2324  OH2 TIP S   54      37.645  11.206  34.448  1.00 28.56      S
      ATOM   2325  OH2 TIP S   55      26.371  28.513  12.142  1.00 32.08      S
      ATOM   2326  OH2 TIP S   58      33.564  19.700   3.483  1.00 28.28      S
   15 ATOM   2327  OH2 TIP S   64      48.295  -0.632  14.280  1.00 32.13      S
      ATOM   2328  OH2 TIP S   65      40.064  26.036  34.324  1.00 24.17      S
      ATOM   2329  OH2 TIP S   66      29.570   3.958  14.729  1.00 28.94      S
      ATOM   2330  OH2 TIP S   72      60.085  11.604   6.814  1.00 38.35      S
      ATOM   2331  OH2 TIP S   73      39.203  44.403  18.686  1.00 26.61      S
   20 ATOM   2332  OH2 TIP S   76      47.312  12.366  27.366  1.00 28.51      S
      ATOM   2333  OH2 TIP S   80      43.862  33.771  33.329  1.00 28.82      S
      ATOM   2334  OH2 TIP S   81      57.890  13.106   2.128  1.00 40.62      S
      ATOM   2335  OH2 TIP S   82      41.663  34.381  32.043  1.00 19.35      S
      ATOM   2336  OH2 TIP S   85      50.974  40.331  19.200  1.00 21.14      S
   25 ATOM   2337  OH2 TIP S   88      47.925  -0.832  -6.556  1.00 24.11      S
      ATOM   2338  OH2 TIP S   90      27.231  28.336  33.481  1.00 27.64      S
      ATOM   2339  OH2 TIP S   91      43.651  -7.101  -7.995  1.00 24.33      S
      ATOM   2340  OH2 TIP S   92      49.325   4.387  19.370  1.00 28.02      S
      ATOM   2341  OH2 TIP S   93      46.231  11.549  33.898  1.00 29.40      S
      ATOM   2342  OH2 TIP S   94      63.889  24.831   1.168  1.00 26.53      S
   30 ATOM   2343  OH2 TIP S   96      56.396   4.952  -6.749  1.00 28.00      S
      ATOM   2344  OH2 TIP S   98      35.510  27.986  11.558  1.00 29.24      S
      ATOM   2345  OH2 TIP S  100      49.942  24.366  30.265  1.00 31.61      S
      ATOM   2346  OH2 TIP S  101      56.121   7.113  -8.298  1.00 31.57      S
   35 ATOM   2347  OH2 TIP S  102      58.318  19.957  -8.378  1.00 26.95      S
      ATOM   2348  OH2 TIP S  103      49.647  22.446  39.624  1.00 40.57      S
      ATOM   2349  OH2 TIP S  104      45.359   7.052  13.052  1.00 26.27      S
      ATOM   2350  OH2 TIP S  105      37.150  32.340  32.346  1.00 34.45      S
      ATOM   2351  OH2 TIP S  107      43.465  40.457   8.240  1.00 40.48      S
   40 ATOM   2352  OH2 TIP S  119      36.644   8.257  13.418  1.00 30.70      S
      ATOM   2353  OH2 TIP S  123      41.912  -8.974  -8.264  1.00 26.08      S
      ATOM   2354  OH2 TIP S  124      62.424  15.800  -7.411  1.00 24.08      S
      ATOM   2355  OH2 TIP S  126      37.266  18.656  -9.097  1.00 28.99      S
      ATOM   2356  OH2 TIP S  127      43.129  26.845  14.606  1.00 25.19      S
   45 ATOM   2357  OH2 TIP S  128      36.339  32.639  29.802  1.00 29.25      S
      ATOM   2358  OH2 TIP S  130      54.051  14.561  26.498  1.00 33.93      S
      ATOM   2359  OH2 TIP S  131      41.805  -4.242   5.492  1.00 33.72      S
      ATOM   2360  OH2 TIP S  133      38.873  25.163  36.697  1.00 30.69      S
      ATOM   2361  OH2 TIP S  134      28.777   8.553  25.307  1.00 31.43      S
   50 ATOM   2362  OH2 TIP S  135      53.672  10.546 -12.803  1.00 33.45      S
      ATOM   2363  OH2 TIP S  136      59.892  15.434  11.467  1.00 31.39      S
      ATOM   2364  OH2 TIP S  137      31.040  12.361  35.470  1.00 34.07      S
      ATOM   2365  OH2 TIP S  139      33.489  14.292  -0.598  1.00 40.68      S
      ATOM   2366  OH2 TIP S  140      46.918   8.748  11.662  1.00 29.23      S
      ATOM   2367  OH2 TIP S  141      46.297  -7.287  -9.196  1.00 42.20      S
   55 ATOM   2368  OH2 TIP S  142      58.193   6.715  -4.685  1.00 35.48      S
      ATOM   2369  OH2 TIP S  143      44.598   4.435  12.503  1.00 27.68      S
      ATOM   2370  OH2 TIP S  144      27.003   5.999  12.450  1.00 36.30      S
      ATOM   2371  OH2 TIP S  145      43.676  32.852  35.735  1.00 35.70      S
      ATOM   2372  OH2 TIP S  146      35.783  18.628  36.452  1.00 34.62      S
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     ATOM   2373  OH2 TIP S 147     25.402    4.058   20.638   1.00 45.03       S
     ATOM   2374  OH2 TIP S 148     45.839   35.853   33.724   1.00 35.47       S
     ATOM   2375  OH2 TIP S 149     22.176   18.976   16.752   1.00 31.87       S
     ATOM   2376  OH2 TIP S 150     43.986   33.179   10.162   1.00 37.70       S
 5   ATOM   2377  OH2 TIP S 151     50.653   20.347   42.428   1.00 35.80       S
     ATOM   2378  OH2 TIP S 152     47.843   24.314    9.506   1.00 31.05       S
     ATOM   2379  OH2 TIP S 153     44.693    5.273  -14.175   1.00 29.90       S
     ATOM   2380  OH2 TIP S 155     26.560   36.851   31.684   1.00 49.29       S
     ATOM   2381  OH2 TIP S 156     46.867    8.019  -12.951   1.00 29.21       S
10   ATOM   2382  OH2 TIP S 157     30.432   28.741   12.438   1.00 37.76       S
     ATOM   2383  OH2 TIP S 158     41.004   20.553    6.423   1.00 39.53       S
     ATOM   2384  OH2 TIP S 159     49.258   20.069   29.294   1.00 33.97       S
     ATOM   2385  OH2 TIP S 160     48.082   28.459   16.489   1.00 33.10       S
     ATOM   2386  OH2 TIP S 161     47.448   18.625   27.683   1.00 34.87       S
15   ATOM   2387  OH2 TIP S 162     19.687   20.632   23.411   1.00 35.01       S
     ATOM   2388  OH2 TIP S 163     32.402   -1.266   22.443   1.00 37.26       S
     ATOM   2389  OH2 TIP S 164     39.475   33.468   33.237   1.00 35.34       S
     ATOM   2390  OH2 TIP S 165     44.277   18.950    5.162   1.00 45.14       S
     ATOM   2391  OH2 TIP S 166     34.797   30.523   10.736   1.00 47.55       S
20   ATOM   2392  OH2 TIP S 167     46.541    3.526  -14.949   1.00 26.54       S
     ATOM   2393  OH2 TIP S 168     36.333   16.371    1.539   1.00 38.68       S
     ATOM   2394  OH2 TIP S 169     46.761   38.936   27.403   1.00 34.66       S
     ATOM   2395  OH2 TIP S 170     24.163   13.264   11.375   1.00 41.23       S
     ATOM   2396  OH2 TIP S 171     48.459   15.018   31.951   1.00 38.11       S
25   ATOM   2397  OH2 TIP S 172     34.261   23.193   40.004   1.00 48.96       S
     ATOM   2398  OH2 TIP S 173     45.924   -0.026   13.224   1.00 39.55       S
     ATOM   2399  OH2 TIP S 175     41.384   37.389   32.543   1.00 40.74       S
     ATOM   2400  OH2 TIP S 177     49.394   35.312   27.150   1.00 44.33       S
     ATOM   2401  OH2 TIP S 178     29.066   29.942   34.359   1.00 41.46       S
30   ATOM   2402  OH2 TIP S 180     49.354   19.467    7.273   1.00 34.56       S
     ATOM   2403  OH2 TIP S 181     25.298   17.029   31.863   1.00 47.74       S
     ATOM   2404  OH2 TIP S 182     37.071   25.027    4.669   1.00 43.87       S
     ATOM   2405  OH2 TIP S 183     22.581    7.487   18.691   1.00 41.75       S
     ATOM   2406  OH2 TIP S 184     32.269    7.011   -1.891   1.00 48.84       S
35   ATOM   2407  OH2 TIP S 185     48.234    0.494    6.833   1.00 48.16       S
     ATOM   2408  OH2 TIP S 187     20.008   14.658   19.211   1.00 45.27       S
     ATOM   2409  OH2 TIP S 188     49.341   22.698   42.272   1.00 42.20       S
     ATOM   2410  OH2 TIP S 190     61.292   18.260   -8.097   1.00 45.21       S
     ATOM   2411  OH2 TIP S 191     28.152   10.606    2.819   1.00 40.38       S
40   ATOM   2412  OH2 TIP S 192     25.626   12.619   23.191   1.00 34.27       S
     ATOM   2413  OH2 TIP S 193     59.876   11.603    1.216   1.00 46.54       S
     ATOM   2414  OH2 TIP S 194     57.592   21.183  -10.646   1.00 45.82       S
     ATOM   2415  OH2 TIP S 195     31.509   36.649   21.499   1.00 38.73       S
     ATOM   2416  OH2 TIP S 197     50.270   -1.543   -6.136   1.00 42.66       S
45   ATOM   2417  OH2 TIP S 198     24.467    8.729   13.088   1.00 42.78       S
     ATOM   2418  OH2 TIP S 199     38.098    8.699   25.759   1.00 32.80       S
     ATOM   2419  OH2 TIP S 200     57.831   11.358  -13.255   1.00 45.31       S
     ATOM   2420  OH2 TIP S 201     23.888   22.328   30.524   1.00 37.12       S
     ATOM   2421  OH2 TIP S 202     47.691   26.068   37.666   1.00 37.92       S
50   ATOM   2422  OH2 TIP S 203     38.653    7.070   29.307   1.00 50.54       S
     ATOM   2423  OH2 TIP S 206     44.424   27.583    2.092   1.00 53.50       S
     ATOM   2424  OH2 TIP S 212     22.258    2.296   17.948   1.00 47.38       S
     ATOM   2425  OH2 TIP S 214     19.843   17.943   23.303   1.00 30.36       S
     ATOM   2426  OH2 TIP S 216     27.647   11.344   24.681   1.00 31.32       S
55   ATOM   2427  OH2 TIP S 217     37.953    7.817   -9.284   1.00 45.97       S
     ATOM   2428  OH2 TIP S 218     33.845   34.040   12.124   1.00 38.11       S
     ATOM   2429  OH2 TIP S 219     58.484   15.269   13.717   1.00 38.26       S
     ATOM   2430  OH2 TIP S 220     48.526   40.920   26.583   1.00 35.23       S
     ATOM   2431  OH2 TIP S 222     52.094   21.184   38.122   1.00 29.86       S
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      ATOM   2432   OH2 TIP S 223    36.889    5.881    3.281  1.00 37.63      S
      ATOM   2433   OH2 TIP S 224    47.642   -1.401 -10.684  1.00 34.89      S
      ATOM   2434   OH2 TIP S 226    47.284    2.916   19.133  1.00 34.10      S
      ATOM   2435   OH2 TIP S 227    42.468    4.463 -15.039  1.00 37.98      S
 5    ATOM   2436   OH2 TIP S 228    19.169   22.832   21.831  1.00 41.57      S
      ATOM   2437   OH2 TIP S 231    57.592   12.689   14.880  1.00 50.22      S
      ATOM   2438   OH2 TIP S 232    27.102    9.176    5.655  1.00 40.57      S
      ATOM   2439   OH2 TIP S 233    58.618    9.072 -11.925  1.00 50.71      S
      ATOM   2440   OH2 TIP S 234    22.822   25.342   19.945  1.00 34.93      S
10    ATOM   2441   OH2 TIP S 236    24.831   32.218   28.901  1.00 37.69      S
      ATOM   2442   OH2 TIP S 237    20.045   10.774   16.992  1.00 39.57      S
      ATOM   2443   OH2 TIP S 238    58.019   19.850   15.679  1.00 41.42      S
      ATOM   2444   OH2 TIP S 239    19.490   20.949   26.114  1.00 34.55      S
      ATOM   2445   OH2 TIP S 240    61.187   26.377    7.346  1.00 39.68      S
15    ATOM   2446   OH2 TIP S 241    33.680   38.342   19.389  1.00 48.93      S
      ATOM   2447   OH2 TIP S 242    51.539   31.612   10.881  1.00 55.65      S
      ATOM   2448   OH2 TIP S 244    25.872   14.431   30.404  1.00 46.69      S
      ATOM   2449   OH2 TIP S 248    37.332    5.849    9.544  1.00 43.81      S
      ATOM   2450   OH2 TIP S 250    39.087   -1.293   -9.655  1.00 42.96      S
20    ATOM   2451   OH2 TIP S 258    23.938   30.000   30.010  1.00 38.89      S
      ATOM   2452   OH2 TIP S 259    24.949   29.749   32.578  1.00 40.17      S
      ATOM   2453   OH2 TIP S 260    32.111   17.986    1.918  1.00 48.36      S
      ATOM   2454   OH2 TIP S 266    21.404   12.876   25.603  1.00 57.17      S
      ATOM   2455   OH2 TIP S 269    35.425   36.767   12.550  1.00 30.70      S
25    ATOM   2456   OH2 TIP S 270    52.438   25.529   30.131  1.00 44.85      S
      ATOM   2457   OH2 TIP S 271    53.299   20.156   36.003  1.00 37.15      S
      ATOM   2458   OH2 TIP S 272    50.914    6.919   23.723  1.00 43.29      S
      ATOM   2459   OH2 TIP S 274    31.578   30.795   11.014  1.00 50.15      S
      ATOM   2460   OH2 TIP S 275    26.341    7.243   22.447  1.00 39.40      S
30    ATOM   2461   OH2 TIP S 276    60.392   18.195   10.235  1.00 37.91      S
      ATOM   2462   OH2 TIP S 277    47.355   -9.081 -10.821  1.00 48.18      S
      ATOM   2463   OH2 TIP S 279    41.304    6.175 -16.647  1.00 38.12      S
      ATOM   2464   OH2 TIP S 282    33.299   21.620   37.881  1.00 46.29      S
      ATOM   2465   OH2 TIP S 283    56.469   26.112   -8.575  1.00 43.71      S
35    ATOM   2466   OH2 TIP S 287    48.382   26.573    7.246  1.00 41.43      S
      ATOM   2467   OH2 TIP S 288    56.240    7.245 -11.331  1.00 41.79      S
      ATOM   2468   OH2 TIP S 290    49.060   14.978   28.166  1.00 37.03      S
      ATOM   2469   OH2 TIP S 291    37.095   44.270   26.442  1.00 45.08      S
      ATOM   2470   OH2 TIP S 292    47.814   -0.384 -13.299  1.00 48.60      S
40    ATOM   2471   OH2 TIP S 297    58.081    2.784   -7.841  1.00 41.89      S
      ATOM   2472   OH2 TIP S 298    36.447   45.321   18.644  1.00 54.91      S
      ATOM   2473   OH2 TIP S 299    49.029   23.328    1.767  1.00 30.55      S
      ATOM   2474   OH2 TIP S 301    24.375   13.771    8.634  1.00 48.47      S
      ATOM   2475   OH2 TIP S 303    47.904   36.798   28.653  1.00 35.76      S
45    ATOM   2476   OH2 TIP S 305    51.156   40.821   27.172  1.00 43.59      S
      ATOM   2477   OH2 TIP S 306    32.943   28.917   35.227  1.00 42.60      S
      ATOM   2478   OH2 TIP S 307    58.462   28.373    6.251  1.00 46.15      S
      ATOM   2479   OH2 TIP S 308    41.964   30.940   36.712  1.00 48.26      S
      ATOM   2480   OH2 TIP S 313    51.176   -1.922   -3.336  1.00 50.61      S
50    ATOM   2481   OH2 TIP S1001    21.319   36.868   23.805  1.00 36.97      S
      ATOM   2482   OH2 TIP S1002    48.880   32.620   27.617  1.00 44.40      S
      ATOM   2483   OH2 TIP S1003    61.880   19.473   11.767  1.00 45.49      S
      ATOM   2484   OH2 TIP S1004    52.770   21.424   26.815  1.00 24.43      S
      ATOM   2485   OH2 TIP S1005    35.373   29.094   36.197  1.00 35.97      S
55    ATOM   2486   OH2 TIP S1006    40.815   -6.636    4.389  1.00 43.15      S
      ATOM   2487   OH2 TIP S1007    44.953    1.286   11.272  1.00 49.45      S
      ATOM   2488   OH2 TIP S1010    21.004   16.168   27.009  1.00 48.51      S
      ATOM   2489   OH2 TIP S1011    47.094   41.786    9.243  1.00 50.10      S
      ATOM   2490   OH2 TIP S1012    32.479    2.978   14.158  1.00 49.47      S
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     ATOM   2491  O12 GLC G   1      48.557  11.372 -12.279  1.00 40.72      G
     ATOM   2492  C11 GLC G   1      48.836  12.133 -11.097  1.00 38.05      G
     ATOM   2493  C13 GLC G   1      49.266  13.554 -11.476  1.00 38.09      G
     ATOM   2494  O14 GLC G   1      49.559  14.299 -10.292  1.00 33.99      G
 5   ATOM   2495  C15 GLC G   1      48.150  14.257 -12.257  1.00 37.32      G
     ATOM   2496  O16 GLC G   1      48.574  15.582 -12.604  1.00 36.74      G
     ATOM   2497  O12 GLC G   2      40.114  -6.634  -6.562  1.00 33.52      G
     ATOM   2498  C11 GLC G   2      38.967  -6.592  -7.404  1.00 31.05      G
     ATOM   2499  C13 GLC G   2      37.712  -6.417  -6.552  1.00 31.56      G
10   ATOM   2500  O14 GLC G   2      36.554  -6.406  -7.389  1.00 30.70      G
     ATOM   2501  C15 GLC G   2      37.792  -5.109  -5.761  1.00 30.03      G
     ATOM   2502  O16 GLC G   2      36.609  -4.961  -4.975  1.00 29.66      G
     ATOM   2503  O12 GLC G   3      44.030   8.243 -13.470  1.00 37.90      G
     ATOM   2504  C11 GLC G   3      43.950   9.648 -13.690  1.00 38.47      G
15   ATOM   2505  C13 GLC G   3      42.747   9.974 -14.579  1.00 39.52      G
     ATOM   2506  O14 GLC G   3      41.551   9.526 -13.942  1.00 39.39      G
     ATOM   2507  C15 GLC G   3      42.878   9.280 -15.934  1.00 41.43      G
     ATOM   2508  O16 GLC G   3      41.736   9.613 -16.731  1.00 40.78      G
     ATOM   2509  O12 GLC G   5      40.556   1.005   2.289  1.00 45.25      G
20   ATOM   2510  C11 GLC G   5      40.966   2.332   1.960  1.00 40.56      G
     ATOM   2511  C13 GLC G   5      40.187   3.327   2.814  1.00 40.36      G
     ATOM   2512  O14 GLC G   5      38.791   3.169   2.572  1.00 40.71      G
     ATOM   2513  C15 GLC G   5      40.619   4.751   2.464  1.00 40.04      G
     ATOM   2514  O16 GLC G   5      39.885   5.681   3.256  1.00 36.89      G
25   ATOM   2515  O12 GLC G   6      36.951  22.702  40.046  1.00 63.04      G
     ATOM   2516  C11 GLC G   6      37.592  21.583  39.422  1.00 62.46      G
     ATOM   2517  C13 GLC G   6      38.104  21.978  38.030  1.00 61.14      G
     ATOM   2518  O14 GLC G   6      39.034  23.054  38.168  1.00 61.72      G
     ATOM   2519  C15 GLC G   6      36.948  22.429  37.126  1.00 60.51      G
30   ATOM   2520  O16 GLC G   6      35.992  21.372  36.960  1.00 58.61      G
     ATOM   2521  O12 GLC G   7      37.316   0.281  14.299  1.00 73.45      G
     ATOM   2522  C11 GLC G   7      37.655  -0.758  15.222  1.00 72.78      G
     ATOM   2523  C13 GLC G   7      36.592  -1.856  15.157  1.00 72.98      G
     ATOM   2524  O14 GLC G   7      35.320  -1.299  15.498  1.00 73.88      G
35   ATOM   2525  C15 GLC G   7      36.924  -2.989  16.134  1.00 73.66      G
     ATOM   2526  O16 GLC G   7      36.972  -2.493  17.478  1.00 75.38      G
     ATOM   2527  O12 GLC G   8      51.921  21.898   5.908  1.00 62.51      G
     ATOM   2528  C11 GLC G   8      52.447  20.871   5.063  1.00 63.42      G
     ATOM   2529  C13 GLC G   8      51.476  20.597   3.908  1.00 64.28      G
40   ATOM   2530  O14 GLC G   8      51.297  21.794   3.150  1.00 66.28      G
     ATOM   2531  C15 GLC G   8      50.121  20.137   4.448  1.00 64.49      G
     ATOM   2532  O16 GLC G   8      49.233  19.886   3.357  1.00 64.01      G
     ATOM   2533  O12 GLC G  10      36.044  37.499  29.523  1.00 56.89      G
     ATOM   2534  C11 GLC G  10      35.164  36.645  30.259  1.00 56.97      G
45   ATOM   2535  C13 GLC G  10      33.849  36.489  29.494  1.00 56.11      G
     ATOM   2536  O14 GLC G  10      33.248  37.772  29.308  1.00 56.44      G
     ATOM   2537  C15 GLC G  10      32.900  35.580  30.277  1.00 55.84      G
     ATOM   2538  O16 GLC G  10      31.674  35.442  29.557  1.00 55.39      G
     ATOM   2539  O3G ATP N   1      46.280  25.658   5.170  1.00 51.49      N
50   ATOM   2540  PG  ATP N   1      46.464  25.053   3.691  1.00 52.22      N
     ATOM   2541  O1G ATP N   1      47.406  23.911   3.763  1.00 51.41      N
     ATOM   2542  O2G ATP N   1      46.794  26.182   2.784  1.00 52.07      N
     ATOM   2543  O3B ATP N   1      44.976  24.513   3.344  1.00 51.01      N
     ATOM   2544  PB  ATP N   1      44.560  22.969   3.605  1.00 50.20      N
55   ATOM   2545  O1B ATP N   1      43.083  22.898   3.669  1.00 49.41      N
     ATOM   2546  O2B ATP N   1      45.345  22.474   4.766  1.00 50.34      N
     ATOM   2547  O3A ATP N   1      45.070  22.231   2.255  1.00 47.77      N
     ATOM   2548  PA  ATP N   1      45.075  20.613   2.121  1.00 42.84      N
     ATOM   2549  O1A ATP N   1      45.547  20.291   0.754  1.00 43.81      N
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	ATOM	2550	O2A	ATP	N	1	45.807	20.035	3.270	1.00	45.03	N
	ATOM	2551	O5*	ATP	N	1	43.516	20.223	2.245	1.00	41.73	N
	ATOM	2552	C5*	ATP	N	1	42.528	20.925	1.489	1.00	37.57	N
	ATOM	2553	C4*	ATP	N	1	41.127	20.379	1.776	1.00	39.45	N
5	ATOM	2554	O4*	ATP	N	1	40.907	19.024	1.279	1.00	37.72	N
	ATOM	2555	C3*	ATP	N	1	40.777	20.321	3.251	1.00	38.48	N
	ATOM	2556	O3*	ATP	N	1	40.360	21.615	3.697	1.00	40.42	N
	ATOM	2557	C2*	ATP	N	1	39.608	19.374	3.270	1.00	37.58	N
	ATOM	2558	O2*	ATP	N	1	38.410	20.076	2.924	1.00	35.98	N
10	ATOM	2559	C1*	ATP	N	1	39.939	18.346	2.173	1.00	35.55	N
	ATOM	2560	N9	ATP	N	1	40.628	17.156	2.747	1.00	31.76	N
	ATOM	2561	C8	ATP	N	1	41.864	17.126	3.274	1.00	30.49	N
	ATOM	2562	N7	ATP	N	1	42.143	15.877	3.667	1.00	29.75	N
	ATOM	2563	C5	ATP	N	1	41.088	15.118	3.390	1.00	27.49	N
15	ATOM	2564	C4	ATP	N	1	40.125	15.925	2.810	1.00	30.02	N
	ATOM	2565	N3	ATP	N	1	38.937	15.389	2.431	1.00	27.11	N
	ATOM	2566	C2	ATP	N	1	38.679	14.085	2.615	1.00	25.62	N
	ATOM	2567	N1	ATP	N	1	39.597	13.283	3.175	1.00	21.76	N
	ATOM	2568	C6	ATP	N	1	40.800	13.768	3.571	1.00	23.90	N
20	ATOM	2569	N6	ATP	N	1	41.698	12.964	4.127	1.00	21.94	N
	ATOM	2570	S	SO4	I	1	58.680	8.493	-0.639	1.00	56.05	I
	ATOM	2571	O1	SO4	I	1	57.956	7.875	0.483	1.00	58.83	I
	ATOM	2572	O2	SO4	I	1	57.886	9.607	-1.188	1.00	57.04	I
	ATOM	2573	O3	SO4	I	1	58.906	7.478	-1.683	1.00	57.47	I
25	ATOM	2574	O4	SO4	I	1	59.976	9.008	-0.156	1.00	57.51	I
	ATOM	2575	S	SO4	I	2	39.339	4.855	7.057	1.00	84.24	I
	ATOM	2576	O1	SO4	I	2	39.390	6.175	7.711	1.00	85.02	I
	ATOM	2577	O2	SO4	I	2	40.101	4.897	5.797	1.00	84.75	I
	ATOM	2578	O3	SO4	I	2	37.936	4.506	6.766	1.00	84.94	I
30	ATOM	2579	O4	SO4	I	2	39.931	3.842	7.954	1.00	84.44	I
	ATOM	2580	S	SO4	I	3	38.987	-2.256	3.310	1.00	58.58	I
	ATOM	2581	O1	SO4	I	3	37.734	-1.675	3.827	1.00	59.11	I
	ATOM	2582	O2	SO4	I	3	39.460	-1.454	2.172	1.00	59.91	I
	ATOM	2583	O3	SO4	I	3	38.743	-3.640	2.866	1.00	60.97	I
35	ATOM	2584	O4	SO4	I	3	40.014	-2.260	4.369	1.00	59.58	I
	ATOM	2585	S	SO4	I	4	34.397	5.289	30.981	1.00	64.34	I
	ATOM	2586	O1	SO4	I	4	33.627	6.528	30.742	1.00	60.43	I
	ATOM	2587	O2	SO4	I	4	34.337	4.427	29.782	1.00	60.11	I
	ATOM	2588	O3	SO4	I	4	33.816	4.572	32.133	1.00	64.39	I
40	ATOM	2589	O4	SO4	I	4	35.806	5.626	31.277	1.00	63.55	I
	ATOM	2590	S	SO4	I	5	55.074	-6.984	-3.711	1.00	75.40	I
	ATOM	2591	O1	SO4	I	5	54.657	-7.518	-2.399	1.00	74.66	I
	ATOM	2592	O2	SO4	I	5	54.209	-5.845	-4.065	1.00	74.96	I
	ATOM	2593	O3	SO4	I	5	54.950	-8.034	-4.742	1.00	74.22	I
45	ATOM	2594	O4	SO4	I	5	56.477	-6.532	-3.633	1.00	75.15	I
	ATOM	2595	O2	PO4	P	100	57.362	24.998	13.149	1.00	66.76	P
	ATOM	2596	O3	PO4	P	100	59.399	26.166	13.761	1.00	66.89	P
	ATOM	2597	O4	PO4	P	100	57.761	25.606	15.462	1.00	67.43	P
	ATOM	2598	O1	PO4	P	100	57.264	27.325	13.818	1.00	65.91	P
50	ATOM	2599	P	PO4	P	100	57.947	26.025	14.048	1.00	66.69	P
	ATOM	2600	CB	GLU		80	50.411	3.975	-13.538	0.50	23.31	AC2
	ATOM	2601	CG	GLU		80	51.306	4.896	-14.362	0.50	24.09	AC2
	ATOM	2602	CD	GLU		80	52.180	5.798	-13.509	0.50	25.13	AC2
	ATOM	2603	OE1	GLU		80	52.841	5.289	-12.580	0.50	22.80	AC2
55	ATOM	2604	OE2	GLU		80	52.212	7.018	-13.774	0.50	28.07	AC2
	ATOM	2605	CB	SER		105	37.582	-1.281	-6.192	0.50	21.16	AC2
	ATOM	2606	OG	SER		105	37.127	-1.871	-4.988	0.50	20.42	AC2
	ATOM	2607	CB	ARG		116	59.520	22.977	-7.867	0.50	31.00	AC2
	ATOM	2608	CG	ARG		116	60.312	24.192	-8.323	0.50	32.50	AC2

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      ATOM   2609  CD   ARG   116    60.266  24.349  -9.838  0.50 34.11       AC2
      ATOM   2610  NE   ARG   116    61.045  25.499 -10.290  0.50 36.67       AC2
      ATOM   2611  CZ   ARG   116    60.729  26.766 -10.035  0.50 37.26       AC2
      ATOM   2612  NH1  ARG   116    59.642  27.053  -9.331  0.50 38.99       AC2
 5    ATOM   2613  NH2  ARG   116    61.503  27.746 -10.479  0.50 37.83       AC2
      ATOM   2614  CB   LEU   145    49.693   8.642   6.631  0.50 15.29       AC2
      ATOM   2615  CG   LEU   145    50.783   8.664   5.552  0.50 14.29       AC2
      ATOM   2616  CD1  LEU   145    50.264   9.373   4.305  0.50  8.20       AC2
      ATOM   2617  CD2  LEU   145    52.030   9.361   6.087  0.50 10.66       AC2
10    ATOM   2618  CB   ARG   183    27.455  16.155  24.989  0.50 19.21       AC2
      ATOM   2619  CG   ARG   183    28.077  15.397  26.147  0.50 18.46       AC2
      ATOM   2620  CD   ARG   183    27.002  14.945  27.127  0.50 19.72       AC2
      ATOM   2621  NE   ARG   183    26.016  14.086  26.478  0.50 18.79       AC2
      ATOM   2622  CZ   ARG   183    24.703  14.279  26.539  0.50 18.52       AC2
15    ATOM   2623  NH1  ARG   183    24.213  15.305  27.221  0.50 15.35       AC2
      ATOM   2624  NH2  ARG   183    23.881  13.445  25.915  0.50 17.55       AC2
      ATOM   2625  CB   SER   191    38.479  10.847  23.036  0.50 16.57       AC2
      ATOM   2626  OG   SER   191    37.418  10.765  23.973  0.50 18.62       AC2
      ATOM   2627  CB   GLU   209    38.645  24.079   8.551  0.50 22.02       AC2
20    ATOM   2628  CG   GLU   209    37.769  25.296   8.263  0.50 23.40       AC2
      ATOM   2629  CD   GLU   209    37.513  26.175   9.483  0.50 24.27       AC2
      ATOM   2630  OE1  GLU   209    37.076  27.328   9.288  0.50 25.25       AC2
      ATOM   2631  OE2  GLU   209    37.737  25.727  10.629  0.50 20.24       AC2
      ATOM   2632  CB   GLN   247    38.598  32.546  14.790  0.50 18.71       AC2
25    ATOM   2633  CG   GLN   247    38.077  33.665  13.900  0.50 16.95       AC2
      ATOM   2634  CD   GLN   247    38.614  33.598  12.479  0.50 19.13       AC2
      ATOM   2635  OE1  GLN   247    39.763  33.221  12.246  0.50 17.24       AC2
      ATOM   2636  NE2  GLN   247    37.780  33.979  11.520  0.50 19.88       AC2
      ATOM   2637  CE   LYS   315    34.978  25.150  36.369  0.50 20.49       AC2
30    ATOM   2638  NZ   LYS   315    34.183  24.074  37.023  0.50 17.05       AC2
      ATOM   2639  CB   GLN   352    32.365   1.170  19.731  0.50 31.10       AC2
      ATOM   2640  CG   GLN   352    33.833   0.778  19.683  0.50 32.11       AC2
      ATOM   2641  CD   GLN   352    34.190   0.027  18.419  0.50 33.04       AC2
      ATOM   2642  OE1  GLN   352    33.906   0.485  17.314  0.50 34.87       AC2
35    ATOM   2643  NE2  GLN   352    34.819  -1.133  18.575  0.50 32.08       AC2
      END
```

Example 3: Co-ordinates for the PDK1 fragment without alternate side chains.

40

```
      REMARK coordinates from restrained individual B-factor refinement
      REMARK refinement resolution: 25.0 - 2.0 A
      REMARK starting r= 0.1972 free_r= 0.2220
      REMARK final    r= 0.1954 free_r= 0.2224
45    REMARK B rmsd for bonded mainchain atoms=  1.501  target= 1.5
      REMARK B rmsd for bonded sidechain atoms=  2.235  target= 2.0
      REMARK B rmsd for angle mainchain atoms=   2.347  target= 2.0
      REMARK B rmsd for angle sidechain atoms=   3.302  target= 2.5
      REMARK rweight=  0.0900 (with wa= 1.29263)
50    REMARK target= mlf  steps= 30
      REMARK sg= P3(2)21 a= 123.013 b= 123.013 c= 47.624 alpha= 90 beta= 90
      gamma= 120
      REMARK parameter file 1  : /dd1/david/projects/PDK1_new/CNS/prot.par
      REMARK parameter file 2  : /dd1/david/projects/PDK1_new/CNS/atp.par
55    REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
      REMARK parameter file 4  : CNS_TOPPAR:ion.param
```

```
     REMARK parameter file 5  : /dd1/david/projects/PDK1_new/CNS/glycerol.par
     REMARK molecular structure file: ../generate/alternate.mtf
     REMARK input coordinates: ../minimize/minimize.pdb
     REMARK reflection file= ../../1/hkl/cns.hkl
 5   REMARK ncs= none
     REMARK B-correction resolution: 6.0 - 2.0
     REMARK initial B-factor correction applied to fobs :
     REMARK   B11= -2.766 B22= -2.766 B33=   5.532
     REMARK   B12= -0.375 B13=  0.000 B23=  0.000
10   REMARK B-factor correction applied to coordinate array B:    0.031
     REMARK bulk solvent: density level= 0.378441 e/A^3, B-factor= 52.6885 A^2
     REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
     REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
     REMARK theoretical total number of refl. in resol. range:     28210 ( 100.0
15   % )
     REMARK number of unobserved reflections (no entry or |F|=0):    568 (    2.0
     % )
     REMARK number of reflections rejected:                            0 (    0.0
     % )
20   REMARK total number of reflections used:                      27642 (  98.0
     % )
     REMARK number of reflections in working set:                  27063 (  95.9
     % )
     REMARK number of reflections in test set:                       579 (    2.1
25   % )
     CRYST1  123.013  123.013   47.624  90.00  90.00 120.00 P 32 2 1
     REMARK FILENAME="bindividual.pdb"
     REMARK DATE:16-Apr-2002  18:31:12      created by user: david
     REMARK VERSION:1.0
30   ATOM      1  CB  PRO A  71      58.912  -7.251   8.216  1.00 67.78      A
     ATOM      2  CG  PRO A  71      59.621  -6.941   9.534  1.00 69.16      A
     ATOM      3  C   PRO A  71      59.493  -6.506   5.894  1.00 67.06      A
     ATOM      4  O   PRO A  71      59.196  -5.318   5.766  1.00 66.66      A
     ATOM      5  N   PRO A  71      60.984  -6.073   7.833  1.00 67.86      A
35   ATOM      6  CD  PRO A  71      60.554  -5.762   9.207  1.00 68.24      A
     ATOM      7  CA  PRO A  71      60.040  -7.035   7.217  1.00 67.75      A
     ATOM      8  N   PRO A  72      59.356  -7.385   4.890  1.00 66.32      A
     ATOM      9  CD  PRO A  72      59.712  -8.816   4.898  1.00 67.17      A
     ATOM     10  CA  PRO A  72      58.840  -6.986   3.578  1.00 65.61      A
40   ATOM     11  CB  PRO A  72      58.672  -8.321   2.858  1.00 66.47      A
     ATOM     12  CG  PRO A  72      59.796  -9.133   3.419  1.00 67.57      A
     ATOM     13  C   PRO A  72      57.527  -6.208   3.673  1.00 63.94      A
     ATOM     14  O   PRO A  72      56.710  -6.451   4.561  1.00 64.11      A
     ATOM     15  N   ALA A  73      57.341  -5.268   2.753  1.00 61.57      A
45   ATOM     16  CA  ALA A  73      56.133  -4.454   2.708  1.00 58.74      A
     ATOM     17  CB  ALA A  73      56.438  -3.030   3.165  1.00 58.05      A
     ATOM     18  C   ALA A  73      55.626  -4.448   1.271  1.00 56.78      A
     ATOM     19  O   ALA A  73      56.347  -4.834   0.349  1.00 56.95      A
     ATOM     20  N   PRO A  74      54.372  -4.024   1.057  1.00 54.15      A
50   ATOM     21  CD  PRO A  74      53.335  -3.610   2.018  1.00 53.31      A
     ATOM     22  CA  PRO A  74      53.856  -4.003  -0.314  1.00 52.54      A
     ATOM     23  CB  PRO A  74      52.474  -3.375  -0.148  1.00 52.86      A
     ATOM     24  CG  PRO A  74      52.067  -3.824   1.226  1.00 52.88      A
     ATOM     25  C   PRO A  74      54.772  -3.167  -1.204  1.00 50.08      A
55   ATOM     26  O   PRO A  74      55.559  -2.361  -0.708  1.00 49.96      A
     ATOM     27  N   ALA A  75      54.680  -3.366  -2.514  1.00 47.58      A
     ATOM     28  CA  ALA A  75      55.503  -2.602  -3.446  1.00 44.69      A
     ATOM     29  CB  ALA A  75      55.312  -3.121  -4.870  1.00 46.14      A
     ATOM     30  C   ALA A  75      55.100  -1.134  -3.371  1.00 41.55      A
```

	ATOM	31	O	ALA A	75	53.947	-0.813	-3.086	1.00 41.01	A
	ATOM	32	N	LYS A	76	56.053	-0.245	-3.619	1.00 38.31	A
	ATOM	33	CA	LYS A	76	55.781	1.184	-3.588	1.00 35.72	A
	ATOM	34	CB	LYS A	76	57.053	1.957	-3.930	1.00 37.70	A
5	ATOM	35	CG	LYS A	76	57.123	3.356	-3.350	1.00 40.99	A
	ATOM	36	CD	LYS A	76	57.262	3.316	-1.836	1.00 40.04	A
	ATOM	37	CE	LYS A	76	57.511	4.705	-1.277	1.00 42.08	A
	ATOM	38	NZ	LYS A	76	57.681	4.695	0.202	1.00 42.99	A
	ATOM	39	C	LYS A	76	54.708	1.467	-4.638	1.00 32.65	A
10	ATOM	40	O	LYS A	76	54.814	1.005	-5.770	1.00 31.41	A
	ATOM	41	N	LYS A	77	53.668	2.207	-4.270	1.00 28.59	A
	ATOM	42	CA	LYS A	77	52.619	2.517	-5.232	1.00 25.72	A
	ATOM	43	CB	LYS A	77	51.316	2.865	-4.509	1.00 26.22	A
	ATOM	44	CG	LYS A	77	50.796	1.731	-3.631	1.00 27.15	A
15	ATOM	45	CD	LYS A	77	49.487	2.089	-2.967	1.00 26.80	A
	ATOM	46	CE	LYS A	77	49.136	1.091	-1.870	1.00 27.31	A
	ATOM	47	NZ	LYS A	77	48.998	-0.296	-2.380	1.00 27.17	A
	ATOM	48	C	LYS A	77	53.053	3.668	-6.137	1.00 24.67	A
	ATOM	49	O	LYS A	77	54.010	4.377	-5.829	1.00 21.60	A
20	ATOM	50	N	ARG A	78	52.351	3.838	-7.254	1.00 23.66	A
	ATOM	51	CA	ARG A	78	52.662	4.897	-8.211	1.00 26.14	A
	ATOM	52	CB	ARG A	78	53.574	4.344	-9.318	1.00 28.57	A
	ATOM	53	CG	ARG A	78	53.017	3.139	-10.050	1.00 34.78	A
	ATOM	54	CD	ARG A	78	54.092	2.465	-10.896	1.00 40.96	A
25	ATOM	55	NE	ARG A	78	53.560	1.364	-11.700	1.00 48.93	A
	ATOM	56	CZ	ARG A	78	52.985	0.270	-11.203	1.00 52.58	A
	ATOM	57	NH1	ARG A	78	52.860	0.113	-9.889	1.00 54.60	A
	ATOM	58	NH2	ARG A	78	52.530	-0.672	-12.022	1.00 54.09	A
	ATOM	59	C	ARG A	78	51.382	5.488	-8.803	1.00 23.76	A
30	ATOM	60	O	ARG A	78	50.311	4.888	-8.706	1.00 24.25	A
	ATOM	61	N	PRO A	79	51.475	6.676	-9.428	1.00 21.76	A
	ATOM	62	CD	PRO A	79	52.691	7.475	-9.668	1.00 20.82	A
	ATOM	63	CA	PRO A	79	50.301	7.325	-10.021	1.00 21.96	A
	ATOM	64	CB	PRO A	79	50.910	8.481	-10.816	1.00 22.27	A
35	ATOM	65	CG	PRO A	79	52.124	8.831	-10.014	1.00 22.12	A
	ATOM	66	C	PRO A	79	49.446	6.413	-10.903	1.00 22.86	A
	ATOM	67	O	PRO A	79	48.213	6.461	-10.842	1.00 20.52	A
	ATOM	68	N	GLU A	80	50.103	5.586	-11.714	1.00 21.87	A
	ATOM	69	CA	GLU A	80	49.403	4.685	-12.628	1.00 22.99	A
40	ATOM	70	CB	GLU A	80	50.393	3.994	-13.571	1.00 25.24	A
	ATOM	71	CG	GLU A	80	51.230	2.907	-12.925	1.00 28.75	A
	ATOM	72	CD	GLU A	80	52.157	2.224	-13.913	1.00 31.99	A
	ATOM	73	OE1	GLU A	80	53.072	2.897	-14.433	1.00 34.34	A
	ATOM	74	OE2	GLU A	80	51.969	1.015	-14.172	1.00 32.83	A
45	ATOM	75	C	GLU A	80	48.556	3.631	-11.912	1.00 22.09	A
	ATOM	76	O	GLU A	80	47.692	3.013	-12.530	1.00 22.37	A
	ATOM	77	N	ASP A	81	48.804	3.413	-10.629	1.00 19.97	A
	ATOM	78	CA	ASP A	81	48.026	2.423	-9.874	1.00 19.93	A
	ATOM	79	CB	ASP A	81	48.736	2.029	-8.571	1.00 21.19	A
50	ATOM	80	CG	ASP A	81	50.089	1.380	-8.807	1.00 22.46	A
	ATOM	81	OD1	ASP A	81	50.195	0.554	-9.731	1.00 24.22	A
	ATOM	82	OD2	ASP A	81	51.043	1.685	-8.058	1.00 23.33	A
	ATOM	83	C	ASP A	81	46.652	2.975	-9.518	1.00 20.85	A
	ATOM	84	O	ASP A	81	45.793	2.246	-9.015	1.00 19.96	A
55	ATOM	85	N	PHE A	82	46.445	4.258	-9.804	1.00 18.91	A
	ATOM	86	CA	PHE A	82	45.200	4.934	-9.465	1.00 19.30	A
	ATOM	87	CB	PHE A	82	45.475	6.027	-8.427	1.00 18.43	A
	ATOM	88	CG	PHE A	82	46.134	5.531	-7.175	1.00 18.01	A
	ATOM	89	CD1	PHE A	82	45.371	5.136	-6.084	1.00 17.19	A

```
      ATOM     90  CD2 PHE A  82      47.520    5.460  -7.086  1.00 18.99      A
      ATOM     91  CE1 PHE A  82      45.977    4.676  -4.918  1.00 17.12      A
      ATOM     92  CE2 PHE A  82      48.137    5.000  -5.925  1.00 19.64      A
      ATOM     93  CZ  PHE A  82      47.361    4.607  -4.838  1.00 18.00      A
  5   ATOM     94  C   PHE A  82      44.476    5.596 -10.621  1.00 20.81      A
      ATOM     95  O   PHE A  82      45.066    5.933 -11.649  1.00 20.34      A
      ATOM     96  N   LYS A  83      43.182    5.792 -10.411  1.00 19.80      A
      ATOM     97  CA  LYS A  83      42.321    6.478 -11.353  1.00 21.65      A
      ATOM     98  CB  LYS A  83      41.096    5.625 -11.687  1.00 22.02      A
 10   ATOM     99  CG  LYS A  83      40.062    6.326 -12.550  1.00 28.93      A
      ATOM    100  CD  LYS A  83      38.974    5.355 -12.981  1.00 34.20      A
      ATOM    101  CE  LYS A  83      37.909    6.042 -13.824  1.00 38.10      A
      ATOM    102  NZ  LYS A  83      37.179    7.086 -13.043  1.00 43.33      A
      ATOM    103  C   LYS A  83      41.913    7.702 -10.541  1.00 20.74      A
 15   ATOM    104  O   LYS A  83      41.084    7.606  -9.635  1.00 20.98      A
      ATOM    105  N   PHE A  84      42.513    8.848 -10.835  1.00 19.99      A
      ATOM    106  CA  PHE A  84      42.188   10.049 -10.083  1.00 18.63      A
      ATOM    107  CB  PHE A  84      43.279   11.103 -10.258  1.00 18.95      A
      ATOM    108  CG  PHE A  84      44.571   10.741  -9.587  1.00 17.68      A
 20   ATOM    109  CD1 PHE A  84      45.498    9.926 -10.224  1.00 18.16      A
      ATOM    110  CD2 PHE A  84      44.843   11.183  -8.299  1.00 19.66      A
      ATOM    111  CE1 PHE A  84      46.676    9.556  -9.589  1.00 18.09      A
      ATOM    112  CE2 PHE A  84      46.021   10.816  -7.653  1.00 18.89      A
      ATOM    113  CZ  PHE A  84      46.936   10.002  -8.301  1.00 17.33      A
 25   ATOM    114  C   PHE A  84      40.834   10.617 -10.460  1.00 19.69      A
      ATOM    115  O   PHE A  84      40.391   10.489 -11.601  1.00 20.72      A
      ATOM    116  N   GLY A  85      40.178   11.233  -9.484  1.00 16.80      A
      ATOM    117  CA  GLY A  85      38.872   11.810  -9.716  1.00 17.73      A
      ATOM    118  C   GLY A  85      38.819   13.280  -9.346  1.00 18.75      A
 30   ATOM    119  O   GLY A  85      39.740   14.043  -9.650  1.00 18.45      A
      ATOM    120  N   LYS A  86      37.753   13.673  -8.659  1.00 16.00      A
      ATOM    121  CA  LYS A  86      37.571   15.064  -8.278  1.00 18.26      A
      ATOM    122  CB  LYS A  86      36.133   15.302  -7.812  1.00 19.00      A
      ATOM    123  CG  LYS A  86      35.793   14.660  -6.481  1.00 21.55      A
 35   ATOM    124  CD  LYS A  86      34.368   14.981  -6.066  1.00 26.48      A
      ATOM    125  CE  LYS A  86      33.994   14.239  -4.793  1.00 31.92      A
      ATOM    126  NZ  LYS A  86      32.568   14.457  -4.412  1.00 35.36      A
      ATOM    127  C   LYS A  86      38.523   15.571  -7.202  1.00 18.57      A
      ATOM    128  O   LYS A  86      39.045   14.807  -6.385  1.00 16.77      A
 40   ATOM    129  N   ILE A  87      38.737   16.881  -7.227  1.00 17.88      A
      ATOM    130  CA  ILE A  87      39.577   17.554  -6.256  1.00 18.26      A
      ATOM    131  CB  ILE A  87      39.994   18.952  -6.772  1.00 19.60      A
      ATOM    132  CG2 ILE A  87      40.593   19.786  -5.628  1.00 18.73      A
      ATOM    133  CG1 ILE A  87      40.968   18.786  -7.945  1.00 21.16      A
 45   ATOM    134  CD1 ILE A  87      41.412   20.087  -8.588  1.00 25.26      A
      ATOM    135  C   ILE A  87      38.731   17.709  -4.997  1.00 19.67      A
      ATOM    136  O   ILE A  87      37.628   18.249  -5.052  1.00 20.41      A
      ATOM    137  N   LEU A  88      39.240   17.229  -3.867  1.00 19.15      A
      ATOM    138  CA  LEU A  88      38.508   17.324  -2.611  1.00 20.68      A
 50   ATOM    139  CB  LEU A  88      38.870   16.151  -1.700  1.00 19.97      A
      ATOM    140  CG  LEU A  88      38.529   14.759  -2.237  1.00 19.24      A
      ATOM    141  CD1 LEU A  88      39.090   13.692  -1.311  1.00 21.41      A
      ATOM    142  CD2 LEU A  88      37.029   14.622  -2.359  1.00 18.84      A
      ATOM    143  C   LEU A  88      38.815   18.632  -1.901  1.00 23.11      A
 55   ATOM    144  O   LEU A  88      37.999   19.146  -1.139  1.00 25.10      A
      ATOM    145  N   GLY A  89      39.997   19.174  -2.149  1.00 24.09      A
      ATOM    146  CA  GLY A  89      40.367   20.418  -1.507  1.00 24.47      A
      ATOM    147  C   GLY A  89      41.658   20.954  -2.078  1.00 25.47      A
      ATOM    148  O   GLY A  89      42.445   20.202  -2.666  1.00 22.19      A
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      ATOM   149  N    GLU A  90      41.870  22.254  -1.906  1.00 26.22      A
      ATOM   150  CA   GLU A  90      43.064  22.924  -2.404  1.00 29.96      A
      ATOM   151  CB   GLU A  90      42.698  23.814  -3.596  1.00 30.75      A
      ATOM   152  CG   GLU A  90      42.267  23.038  -4.831  1.00 34.32      A
   5  ATOM   153  CD   GLU A  90      41.711  23.930  -5.927  1.00 38.27      A
      ATOM   154  OE1  GLU A  90      40.590  24.456  -5.764  1.00 40.57      A
      ATOM   155  OE2  GLU A  90      42.398  24.110  -6.952  1.00 40.90      A
      ATOM   156  C    GLU A  90      43.711  23.768  -1.313  1.00 30.68      A
      ATOM   157  O    GLU A  90      43.049  24.574  -0.668  1.00 32.83      A
  10  ATOM   158  N    GLY A  91      45.006  23.566  -1.104  1.00 29.66      A
      ATOM   159  CA   GLY A  91      45.724  24.332  -0.104  1.00 29.40      A
      ATOM   160  C    GLY A  91      46.795  25.151  -0.798  1.00 29.98      A
      ATOM   161  O    GLY A  91      46.894  25.130  -2.028  1.00 28.16      A
      ATOM   162  N    SER A  92      47.605  25.870  -0.029  1.00 28.30      A
  15  ATOM   163  CA   SER A  92      48.653  26.681  -0.633  1.00 30.50      A
      ATOM   164  CB   SER A  92      49.165  27.717   0.370  1.00 32.43      A
      ATOM   165  OG   SER A  92      49.520  27.099   1.593  1.00 40.94      A
      ATOM   166  C    SER A  92      49.815  25.843  -1.164  1.00 29.77      A
      ATOM   167  O    SER A  92      50.456  26.221  -2.143  1.00 30.46      A
  20  ATOM   168  N    PHE A  93      50.087  24.703  -0.536  1.00 27.65      A
      ATOM   169  CA   PHE A  93      51.185  23.855  -0.995  1.00 26.34      A
      ATOM   170  CB   PHE A  93      52.281  23.785   0.068  1.00 27.95      A
      ATOM   171  CG   PHE A  93      52.861  25.117   0.406  1.00 31.06      A
      ATOM   172  CD1  PHE A  93      52.283  25.909   1.392  1.00 29.96      A
  25  ATOM   173  CD2  PHE A  93      53.949  25.613  -0.308  1.00 31.38      A
      ATOM   174  CE1  PHE A  93      52.779  27.181   1.665  1.00 32.69      A
      ATOM   175  CE2  PHE A  93      54.452  26.883  -0.044  1.00 32.63      A
      ATOM   176  CZ   PHE A  93      53.864  27.670   0.945  1.00 31.81      A
      ATOM   177  C    PHE A  93      50.759  22.445  -1.365  1.00 25.39      A
  30  ATOM   178  O    PHE A  93      51.601  21.559  -1.522  1.00 24.59      A
      ATOM   179  N    SER A  94      49.457  22.235  -1.519  1.00 23.63      A
      ATOM   180  CA   SER A  94      48.956  20.912  -1.860  1.00 21.43      A
      ATOM   181  CB   SER A  94      49.017  20.013  -0.628  1.00 21.42      A
      ATOM   182  OG   SER A  94      48.091  20.475   0.340  1.00 21.19      A
  35  ATOM   183  C    SER A  94      47.539  20.925  -2.378  1.00 19.82      A
      ATOM   184  O    SER A  94      46.795  21.882  -2.173  1.00 18.76      A
      ATOM   185  N    THR A  95      47.174  19.832  -3.038  1.00 19.38      A
      ATOM   186  CA   THR A  95      45.840  19.637  -3.580  1.00 17.98      A
      ATOM   187  CB   THR A  95      45.818  19.818  -5.110  1.00 19.25      A
  40  ATOM   188  OG1  THR A  95      46.196  21.162  -5.434  1.00 22.04      A
      ATOM   189  CG2  THR A  95      44.421  19.549  -5.661  1.00 17.61      A
      ATOM   190  C    THR A  95      45.455  18.201  -3.243  1.00 18.61      A
      ATOM   191  O    THR A  95      46.212  17.264  -3.524  1.00 17.10      A
      ATOM   192  N    VAL A  96      44.295  18.024  -2.623  1.00 16.53      A
  45  ATOM   193  CA   VAL A  96      43.845  16.685  -2.266  1.00 16.05      A
      ATOM   194  CB   VAL A  96      43.170  16.672  -0.886  1.00 16.32      A
      ATOM   195  CG1  VAL A  96      42.741  15.249  -0.532  1.00 18.02      A
      ATOM   196  CG2  VAL A  96      44.145  17.206   0.168  1.00 16.69      A
      ATOM   197  C    VAL A  96      42.875  16.207  -3.335  1.00 16.42      A
  50  ATOM   198  O    VAL A  96      41.906  16.892  -3.665  1.00 16.47      A
      ATOM   199  N    VAL A  97      43.157  15.033  -3.888  1.00 16.80      A
      ATOM   200  CA   VAL A  97      42.338  14.471  -4.949  1.00 16.72      A
      ATOM   201  CB   VAL A  97      43.153  14.354  -6.255  1.00 18.43      A
      ATOM   202  CG1  VAL A  97      42.249  13.927  -7.404  1.00 19.69      A
  55  ATOM   203  CG2  VAL A  97      43.831  15.685  -6.569  1.00 17.84      A
      ATOM   204  C    VAL A  97      41.812  13.091  -4.583  1.00 16.77      A
      ATOM   205  O    VAL A  97      42.532  12.270  -4.014  1.00 17.13      A
      ATOM   206  N    LEU A  98      40.545  12.845  -4.895  1.00 16.62      A
      ATOM   207  CA   LEU A  98      39.947  11.548  -4.624  1.00 17.04      A
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	ATOM	208	CB	LEU A	98	38.424	11.633	-4.743	1.00 16.89	A
	ATOM	209	CG	LEU A	98	37.635	10.342	-4.508	1.00 19.46	A
	ATOM	210	CD1	LEU A	98	37.990	9.762	-3.146	1.00 20.07	A
	ATOM	211	CD2	LEU A	98	36.143	10.627	-4.588	1.00 17.93	A
5	ATOM	212	C	LEU A	98	40.512	10.597	-5.677	1.00 17.38	A
	ATOM	213	O	LEU A	98	40.527	10.920	-6.863	1.00 18.60	A
	ATOM	214	N	ALA A	99	40.995	9.438	-5.246	1.00 17.13	A
	ATOM	215	CA	ALA A	99	41.570	8.466	-6.168	1.00 18.42	A
	ATOM	216	CB	ALA A	99	43.090	8.524	-6.105	1.00 14.76	A
10	ATOM	217	C	ALA A	99	41.102	7.055	-5.848	1.00 21.40	A
	ATOM	218	O	ALA A	99	40.941	6.691	-4.679	1.00 22.52	A
	ATOM	219	N	ARG A	100	40.878	6.261	-6.888	1.00 19.77	A
	ATOM	220	CA	ARG A	100	40.459	4.884	-6.693	1.00 20.85	A
	ATOM	221	CB	ARG A	100	39.202	4.585	-7.518	1.00 24.22	A
15	ATOM	222	CG	ARG A	100	38.608	3.205	-7.256	1.00 31.78	A
	ATOM	223	CD	ARG A	100	37.326	2.979	-8.048	1.00 36.24	A
	ATOM	224	NE	ARG A	100	36.213	3.818	-7.594	1.00 41.40	A
	ATOM	225	CZ	ARG A	100	35.566	3.662	-6.439	1.00 42.05	A
	ATOM	226	NH1	ARG A	100	35.912	2.696	-5.598	1.00 40.67	A
20	ATOM	227	NH2	ARG A	100	34.559	4.468	-6.128	1.00 43.65	A
	ATOM	228	C	ARG A	100	41.613	3.985	-7.129	1.00 18.63	A
	ATOM	229	O	ARG A	100	42.078	4.065	-8.271	1.00 19.49	A
	ATOM	230	N	GLU A	101	42.102	3.157	-6.212	1.00 16.43	A
	ATOM	231	CA	GLU A	101	43.196	2.246	-6.533	1.00 16.11	A
25	ATOM	232	CB	GLU A	101	43.774	1.637	-5.248	1.00 16.79	A
	ATOM	233	CG	GLU A	101	44.917	0.657	-5.488	1.00 16.51	A
	ATOM	234	CD	GLU A	101	45.501	0.115	-4.200	1.00 18.20	A
	ATOM	235	OE1	GLU A	101	44.733	-0.081	-3.239	1.00 18.32	A
	ATOM	236	OE2	GLU A	101	46.725	-0.132	-4.150	1.00 17.14	A
30	ATOM	237	C	GLU A	101	42.625	1.152	-7.442	1.00 17.92	A
	ATOM	238	O	GLU A	101	41.681	0.462	-7.069	1.00 18.02	A
	ATOM	239	N	LEU A	102	43.198	1.002	-8.632	1.00 19.06	A
	ATOM	240	CA	LEU A	102	42.718	0.025	-9.607	1.00 20.71	A
	ATOM	241	CB	LEU A	102	43.569	0.097	-10.878	1.00 23.42	A
35	ATOM	242	CG	LEU A	102	43.531	1.426	-11.642	1.00 25.30	A
	ATOM	243	CD1	LEU A	102	44.577	1.414	-12.748	1.00 27.88	A
	ATOM	244	CD2	LEU A	102	42.140	1.647	-12.214	1.00 26.79	A
	ATOM	245	C	LEU A	102	42.671	-1.418	-9.125	1.00 21.62	A
	ATOM	246	O	LEU A	102	41.668	-2.103	-9.305	1.00 21.09	A
40	ATOM	247	N	ALA A	103	43.753	-1.874	-8.507	1.00 19.38	A
	ATOM	248	CA	ALA A	103	43.836	-3.249	-8.035	1.00 20.87	A
	ATOM	249	CB	ALA A	103	45.284	-3.571	-7.671	1.00 19.23	A
	ATOM	250	C	ALA A	103	42.919	-3.629	-6.872	1.00 19.92	A
	ATOM	251	O	ALA A	103	42.703	-4.815	-6.628	1.00 20.38	A
45	ATOM	252	N	THR A	104	42.361	-2.643	-6.175	1.00 18.12	A
	ATOM	253	CA	THR A	104	41.517	-2.927	-5.018	1.00 17.15	A
	ATOM	254	CB	THR A	104	42.212	-2.484	-3.717	1.00 19.54	A
	ATOM	255	OG1	THR A	104	42.456	-1.070	-3.773	1.00 19.26	A
	ATOM	256	CG2	THR A	104	43.536	-3.219	-3.529	1.00 17.02	A
50	ATOM	257	C	THR A	104	40.159	-2.247	-5.026	1.00 19.44	A
	ATOM	258	O	THR A	104	39.259	-2.648	-4.285	1.00 18.70	A
	ATOM	259	N	SER A	105	40.034	-1.207	-5.847	1.00 19.65	A
	ATOM	260	CA	SER A	105	38.819	-0.400	-5.967	1.00 19.77	A
	ATOM	261	CB	SER A	105	37.598	-1.304	-6.173	1.00 21.81	A
55	ATOM	262	OG	SER A	105	36.431	-0.539	-6.412	1.00 23.01	A
	ATOM	263	C	SER A	105	38.644	0.447	-4.701	1.00 18.99	A
	ATOM	264	O	SER A	105	37.602	1.070	-4.488	1.00 18.66	A
	ATOM	265	N	ARG A	106	39.674	0.468	-3.861	1.00 16.84	A
	ATOM	266	CA	ARG A	106	39.655	1.267	-2.634	1.00 16.21	A

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      ATOM   267  CB  ARG A 106    40.827   0.886  -1.723  1.00 16.41      A
      ATOM   268  CG  ARG A 106    40.619  -0.367  -0.906  1.00 15.49      A
      ATOM   269  CD  ARG A 106    41.887  -0.755  -0.170  1.00 17.43      A
      ATOM   270  NE  ARG A 106    41.620  -1.792   0.824  1.00 20.47      A
 5    ATOM   271  CZ  ARG A 106    42.548  -2.568   1.371  1.00 20.24      A
      ATOM   272  NH1 ARG A 106    43.821  -2.433   1.017  1.00 17.80      A
      ATOM   273  NH2 ARG A 106    42.198  -3.468   2.285  1.00 20.14      A
      ATOM   274  C   ARG A 106    39.785   2.746  -2.981  1.00 17.37      A
      ATOM   275  O   ARG A 106    40.514   3.103  -3.902  1.00 17.75      A
10    ATOM   276  N   GLU A 107    39.085   3.599  -2.240  1.00 16.06      A
      ATOM   277  CA  GLU A 107    39.156   5.039  -2.461  1.00 20.80      A
      ATOM   278  CB  GLU A 107    37.779   5.694  -2.337  1.00 22.93      A
      ATOM   279  CG  GLU A 107    36.711   5.171  -3.269  1.00 30.87      A
      ATOM   280  CD  GLU A 107    35.431   5.975  -3.148  1.00 32.40      A
15    ATOM   281  OE1 GLU A 107    35.262   6.939  -3.923  1.00 33.74      A
      ATOM   282  OE2 GLU A 107    34.608   5.654  -2.263  1.00 36.00      A
      ATOM   283  C   GLU A 107    40.053   5.678  -1.410  1.00 18.93      A
      ATOM   284  O   GLU A 107    39.891   5.427  -0.220  1.00 19.21      A
      ATOM   285  N   TYR A 108    40.988   6.507  -1.852  1.00 16.70      A
20    ATOM   286  CA  TYR A 108    41.883   7.209  -0.942  1.00 15.86      A
      ATOM   287  CB  TYR A 108    43.325   6.728  -1.104  1.00 15.30      A
      ATOM   288  CG  TYR A 108    43.593   5.328  -0.612  1.00 16.33      A
      ATOM   289  CD1 TYR A 108    43.765   5.066   0.746  1.00 16.36      A
      ATOM   290  CE1 TYR A 108    44.046   3.769   1.201  1.00 18.48      A
25    ATOM   291  CD2 TYR A 108    43.701   4.268  -1.511  1.00 13.25      A
      ATOM   292  CE2 TYR A 108    43.980   2.981  -1.075  1.00 17.28      A
      ATOM   293  CZ  TYR A 108    44.152   2.736   0.276  1.00 19.17      A
      ATOM   294  OH  TYR A 108    44.440   1.461   0.688  1.00 19.38      A
      ATOM   295  C   TYR A 108    41.850   8.687  -1.292  1.00 16.80      A
30    ATOM   296  O   TYR A 108    41.560   9.058  -2.431  1.00 15.22      A
      ATOM   297  N   ALA A 109    42.132   9.528  -0.306  1.00 14.61      A
      ATOM   298  CA  ALA A 109    42.207  10.957  -0.539  1.00 14.30      A
      ATOM   299  CB  ALA A 109    41.671  11.726   0.661  1.00 14.78      A
      ATOM   300  C   ALA A 109    43.713  11.136  -0.667  1.00 16.79      A
35    ATOM   301  O   ALA A 109    44.450  10.983   0.317  1.00 16.52      A
      ATOM   302  N   ILE A 110    44.182  11.410  -1.881  1.00 14.80      A
      ATOM   303  CA  ILE A 110    45.609  11.574  -2.093  1.00 15.80      A
      ATOM   304  CB  ILE A 110    46.065  10.863  -3.396  1.00 16.85      A
      ATOM   305  CG2 ILE A 110    47.550  11.098  -3.632  1.00 16.80      A
40    ATOM   306  CG1 ILE A 110    45.774   9.358  -3.284  1.00 17.76      A
      ATOM   307  CD1 ILE A 110    46.308   8.513  -4.437  1.00 16.07      A
      ATOM   308  C   ILE A 110    46.004  13.045  -2.129  1.00 17.78      A
      ATOM   309  O   ILE A 110    45.534  13.813  -2.976  1.00 16.24      A
      ATOM   310  N   LYS A 111    46.846  13.435  -1.177  1.00 16.15      A
45    ATOM   311  CA  LYS A 111    47.326  14.808  -1.100  1.00 17.20      A
      ATOM   312  CB  LYS A 111    47.700  15.176   0.344  1.00 17.41      A
      ATOM   313  CG  LYS A 111    48.350  16.547   0.464  1.00 20.71      A
      ATOM   314  CD  LYS A 111    48.585  16.971   1.910  1.00 24.25      A
      ATOM   315  CE  LYS A 111    47.288  17.381   2.598  1.00 29.46      A
50    ATOM   316  NZ  LYS A 111    47.516  17.866   4.000  1.00 30.50      A
      ATOM   317  C   LYS A 111    48.551  14.890  -1.994  1.00 16.41      A
      ATOM   318  O   LYS A 111    49.509  14.137  -1.813  1.00 18.20      A
      ATOM   319  N   ILE A 112    48.509  15.798  -2.963  1.00 15.87      A
      ATOM   320  CA  ILE A 112    49.606  15.967  -3.907  1.00 17.28      A
55    ATOM   321  CB  ILE A 112    49.079  15.911  -5.358  1.00 16.43      A
      ATOM   322  CG2 ILE A 112    50.235  15.998  -6.341  1.00 15.12      A
      ATOM   323  CG1 ILE A 112    48.293  14.609  -5.565  1.00 15.80      A
      ATOM   324  CD1 ILE A 112    47.580  14.511  -6.904  1.00 18.47      A
      ATOM   325  C   ILE A 112    50.307  17.301  -3.663  1.00 19.03      A
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	ATOM	326	O	ILE A 112	49.669	18.350	-3.635	1.00 19.15	A
	ATOM	327	N	LEU A 113	51.622	17.245	-3.472	1.00 20.22	A
	ATOM	328	CA	LEU A 113	52.416	18.442	-3.214	1.00 22.36	A
	ATOM	329	CB	LEU A 113	52.995	18.397	-1.794	1.00 22.13	A
5	ATOM	330	CG	LEU A 113	52.042	18.063	-0.646	1.00 22.46	A
	ATOM	331	CD1	LEU A 113	51.866	16.557	-0.553	1.00 23.81	A
	ATOM	332	CD2	LEU A 113	52.603	18.595	0.660	1.00 23.68	A
	ATOM	333	C	LEU A 113	53.560	18.547	-4.215	1.00 23.37	A
	ATOM	334	O	LEU A 113	54.300	17.586	-4.424	1.00 23.11	A
10	ATOM	335	N	GLU A 114	53.706	19.714	-4.834	1.00 23.88	A
	ATOM	336	CA	GLU A 114	54.771	19.920	-5.806	1.00 26.00	A
	ATOM	337	CB	GLU A 114	54.435	21.111	-6.706	1.00 27.74	A
	ATOM	338	CG	GLU A 114	55.533	21.452	-7.696	1.00 35.07	A
	ATOM	339	CD	GLU A 114	55.220	22.696	-8.497	1.00 39.24	A
15	ATOM	340	OE1	GLU A 114	54.808	23.703	-7.885	1.00 41.45	A
	ATOM	341	OE2	GLU A 114	55.395	22.670	-9.736	1.00 44.05	A
	ATOM	342	C	GLU A 114	56.087	20.163	-5.067	1.00 24.37	A
	ATOM	343	O	GLU A 114	56.186	21.071	-4.238	1.00 24.43	A
	ATOM	344	N	LYS A 115	57.096	19.350	-5.360	1.00 24.10	A
20	ATOM	345	CA	LYS A 115	58.376	19.493	-4.678	1.00 24.93	A
	ATOM	346	CB	LYS A 115	59.339	18.373	-5.103	1.00 23.72	A
	ATOM	347	CG	LYS A 115	59.139	17.080	-4.308	1.00 23.09	A
	ATOM	348	CD	LYS A 115	60.064	15.944	-4.743	1.00 21.92	A
	ATOM	349	CE	LYS A 115	59.691	15.400	-6.117	1.00 22.42	A
25	ATOM	350	NZ	LYS A 115	60.447	14.150	-6.448	1.00 19.71	A
	ATOM	351	C	LYS A 115	59.031	20.858	-4.868	1.00 26.87	A
	ATOM	352	O	LYS A 115	59.492	21.469	-3.903	1.00 26.17	A
	ATOM	353	N	ARG A 116	59.058	21.348	-6.102	1.00 28.73	A
	ATOM	354	CA	ARG A 116	59.678	22.638	-6.380	1.00 29.66	A
30	ATOM	355	CB	ARG A 116	59.533	22.980	-7.868	1.00 31.29	A
	ATOM	356	CG	ARG A 116	60.047	24.361	-8.267	1.00 33.19	A
	ATOM	357	CD	ARG A 116	61.368	24.710	-7.590	1.00 35.13	A
	ATOM	358	NE	ARG A 116	62.329	23.612	-7.618	1.00 36.42	A
	ATOM	359	CZ	ARG A 116	63.510	23.648	-7.009	1.00 36.18	A
35	ATOM	360	NH1	ARG A 116	63.871	24.729	-6.332	1.00 36.12	A
	ATOM	361	NH2	ARG A 116	64.324	22.602	-7.067	1.00 35.77	A
	ATOM	362	C	ARG A 116	59.097	23.761	-5.519	1.00 29.70	A
	ATOM	363	O	ARG A 116	59.843	24.515	-4.889	1.00 29.16	A
	ATOM	364	N	HIS A 117	57.773	23.862	-5.472	1.00 27.22	A
40	ATOM	365	CA	HIS A 117	57.126	24.903	-4.681	1.00 26.33	A
	ATOM	366	CB	HIS A 117	55.606	24.835	-4.848	1.00 28.41	A
	ATOM	367	CG	HIS A 117	54.881	26.005	-4.258	1.00 31.82	A
	ATOM	368	CD2	HIS A 117	55.309	27.249	-3.935	1.00 33.19	A
	ATOM	369	ND1	HIS A 117	53.536	25.974	-3.961	1.00 34.30	A
45	ATOM	370	CE1	HIS A 117	53.165	27.148	-3.480	1.00 34.58	A
	ATOM	371	NE2	HIS A 117	54.222	27.940	-3.455	1.00 35.18	A
	ATOM	372	C	HIS A 117	57.477	24.780	-3.202	1.00 26.22	A
	ATOM	373	O	HIS A 117	57.737	25.776	-2.534	1.00 25.67	A
	ATOM	374	N	ILE A 118	57.469	23.554	-2.689	1.00 24.94	A
50	ATOM	375	CA	ILE A 118	57.792	23.315	-1.285	1.00 23.94	A
	ATOM	376	CB	ILE A 118	57.711	21.812	-0.952	1.00 23.50	A
	ATOM	377	CG2	ILE A 118	58.374	21.533	0.389	1.00 23.76	A
	ATOM	378	CG1	ILE A 118	56.246	21.362	-0.959	1.00 24.42	A
	ATOM	379	CD1	ILE A 118	56.066	19.858	-0.834	1.00 28.06	A
55	ATOM	380	C	ILE A 118	59.195	23.821	-0.958	1.00 23.78	A
	ATOM	381	O	ILE A 118	59.402	24.495	0.048	1.00 23.49	A
	ATOM	382	N	ILE A 119	60.133	23.489	-1.815	1.00 23.39	A
	ATOM	383	CA	ILE A 119	61.534	23.913	-1.619	1.00 25.13	A
	ATOM	384	CB	ILE A 119	62.467	23.250	-2.664	1.00 24.25	A

	ATOM	385	CG2	ILE A 119	63.858	23.890	-2.617	1.00	22.47	A
	ATOM	386	CG1	ILE A 119	62.540	21.738	-2.395	1.00	25.05	A
	ATOM	387	CD1	ILE A 119	63.327	20.945	-3.439	1.00	24.62	A
	ATOM	388	C	ILE A 119	61.667	25.435	-1.705	1.00	25.96	A
5	ATOM	389	O	ILE A 119	62.330	26.051	-0.872	1.00	24.78	A
	ATOM	390	N	LYS A 120	61.028	26.039	-2.704	1.00	27.67	A
	ATOM	391	CA	LYS A 120	61.100	27.489	-2.879	1.00	30.29	A
	ATOM	392	CB	LYS A 120	60.242	27.940	-4.060	1.00	32.34	A
	ATOM	393	CG	LYS A 120	60.674	27.407	-5.409	1.00	39.30	A
10	ATOM	394	CD	LYS A 120	59.765	27.950	-6.512	1.00	45.19	A
	ATOM	395	CE	LYS A 120	58.294	27.636	-6.218	1.00	46.48	A
	ATOM	396	NZ	LYS A 120	57.363	28.155	-7.252	1.00	46.49	A
	ATOM	397	C	LYS A 120	60.647	28.247	-1.638	1.00	30.89	A
	ATOM	398	O	LYS A 120	61.303	29.198	-1.217	1.00	32.48	A
15	ATOM	399	N	GLU A 121	59.527	27.825	-1.055	1.00	29.82	A
	ATOM	400	CA	GLU A 121	58.986	28.488	0.128	1.00	30.33	A
	ATOM	401	CB	GLU A 121	57.455	28.416	0.117	1.00	33.04	A
	ATOM	402	CG	GLU A 121	56.794	29.021	-1.120	1.00	36.45	A
	ATOM	403	CD	GLU A 121	57.221	30.456	-1.373	1.00	39.88	A
20	ATOM	404	OE1	GLU A 121	57.200	31.264	-0.420	1.00	40.53	A
	ATOM	405	OE2	GLU A 121	57.573	30.778	-2.529	1.00	43.24	A
	ATOM	406	C	GLU A 121	59.511	27.930	1.451	1.00	30.37	A
	ATOM	407	O	GLU A 121	58.946	28.204	2.513	1.00	31.24	A
	ATOM	408	N	ASN A 122	60.588	27.151	1.390	1.00	29.03	A
25	ATOM	409	CA	ASN A 122	61.183	26.573	2.594	1.00	28.46	A
	ATOM	410	CB	ASN A 122	61.836	27.673	3.436	1.00	31.28	A
	ATOM	411	CG	ASN A 122	62.945	28.395	2.698	1.00	34.12	A
	ATOM	412	OD1	ASN A 122	62.697	29.143	1.754	1.00	35.57	A
	ATOM	413	ND2	ASN A 122	64.181	28.169	3.127	1.00	35.73	A
30	ATOM	414	C	ASN A 122	60.157	25.835	3.456	1.00	26.89	A
	ATOM	415	O	ASN A 122	60.085	26.055	4.663	1.00	27.23	A
	ATOM	416	N	LYS A 123	59.375	24.955	2.842	1.00	23.99	A
	ATOM	417	CA	LYS A 123	58.358	24.210	3.574	1.00	22.43	A
	ATOM	418	CB	LYS A 123	57.031	24.248	2.810	1.00	21.97	A
35	ATOM	419	CG	LYS A 123	56.475	25.645	2.599	1.00	25.68	A
	ATOM	420	CD	LYS A 123	56.253	26.354	3.927	1.00	27.54	A
	ATOM	421	CE	LYS A 123	55.822	27.796	3.716	1.00	31.30	A
	ATOM	422	NZ	LYS A 123	55.756	28.540	5.004	1.00	33.21	A
	ATOM	423	C	LYS A 123	58.748	22.759	3.821	1.00	22.20	A
40	ATOM	424	O	LYS A 123	57.924	21.960	4.264	1.00	22.50	A
	ATOM	425	N	VAL A 124	59.997	22.412	3.535	1.00	20.59	A
	ATOM	426	CA	VAL A 124	60.439	21.039	3.730	1.00	20.25	A
	ATOM	427	CB	VAL A 124	61.922	20.850	3.328	1.00	19.43	A
	ATOM	428	CG1	VAL A 124	62.346	19.407	3.573	1.00	18.69	A
45	ATOM	429	CG2	VAL A 124	62.104	21.195	1.853	1.00	18.21	A
	ATOM	430	C	VAL A 124	60.236	20.561	5.163	1.00	19.53	A
	ATOM	431	O	VAL A 124	59.841	19.418	5.385	1.00	20.02	A
	ATOM	432	N	PRO A 125	60.513	21.422	6.159	1.00	20.01	A
	ATOM	433	CD	PRO A 125	61.178	22.738	6.118	1.00	18.69	A
50	ATOM	434	CA	PRO A 125	60.318	20.979	7.544	1.00	19.88	A
	ATOM	435	CB	PRO A 125	60.793	22.180	8.363	1.00	19.95	A
	ATOM	436	CG	PRO A 125	61.839	22.805	7.479	1.00	18.85	A
	ATOM	437	C	PRO A 125	58.848	20.642	7.824	1.00	19.76	A
	ATOM	438	O	PRO A 125	58.544	19.700	8.550	1.00	16.99	A
55	ATOM	439	N	TYR A 126	57.947	21.418	7.235	1.00	18.98	A
	ATOM	440	CA	TYR A 126	56.516	21.220	7.435	1.00	21.97	A
	ATOM	441	CB	TYR A 126	55.752	22.448	6.933	1.00	25.17	A
	ATOM	442	CG	TYR A 126	56.040	23.690	7.748	1.00	30.98	A
	ATOM	443	CD1	TYR A 126	55.438	23.886	8.991	1.00	33.95	A

	ATOM	444	CE1	TYR A 126	55.721	25.015	9.763	1.00	36.60	A
	ATOM	445	CD2	TYR A 126	56.938	24.657	7.292	1.00	35.43	A
	ATOM	446	CE2	TYR A 126	57.231	25.792	8.058	1.00	37.20	A
	ATOM	447	CZ	TYR A 126	56.618	25.962	9.291	1.00	37.40	A
5	ATOM	448	OH	TYR A 126	56.903	27.073	10.052	1.00	40.85	A
	ATOM	449	C	TYR A 126	55.990	19.956	6.762	1.00	21.35	A
	ATOM	450	O	TYR A 126	55.265	19.175	7.383	1.00	20.49	A
	ATOM	451	N	VAL A 127	56.354	19.746	5.501	1.00	18.16	A
	ATOM	452	CA	VAL A 127	55.892	18.562	4.790	1.00	17.58	A
10	ATOM	453	CB	VAL A 127	56.308	18.596	3.308	1.00	17.45	A
	ATOM	454	CG1	VAL A 127	55.786	17.350	2.600	1.00	17.97	A
	ATOM	455	CG2	VAL A 127	55.751	19.850	2.641	1.00	14.90	A
	ATOM	456	C	VAL A 127	56.459	17.306	5.448	1.00	18.39	A
	ATOM	457	O	VAL A 127	55.769	16.298	5.583	1.00	18.14	A
15	ATOM	458	N	THR A 128	57.716	17.381	5.869	1.00	17.50	A
	ATOM	459	CA	THR A 128	58.375	16.260	6.530	1.00	18.54	A
	ATOM	460	CB	THR A 128	59.861	16.586	6.805	1.00	18.01	A
	ATOM	461	OG1	THR A 128	60.537	16.804	5.559	1.00	21.14	A
	ATOM	462	CG2	THR A 128	60.536	15.446	7.545	1.00	17.95	A
20	ATOM	463	C	THR A 128	57.676	15.941	7.856	1.00	19.49	A
	ATOM	464	O	THR A 128	57.438	14.776	8.179	1.00	18.76	A
	ATOM	465	N	ARG A 129	57.345	16.981	8.619	1.00	19.60	A
	ATOM	466	CA	ARG A 129	56.673	16.804	9.904	1.00	20.12	A
	ATOM	467	CB	ARG A 129	56.534	18.144	10.621	1.00	21.33	A
25	ATOM	468	CG	ARG A 129	55.948	18.029	12.023	1.00	28.02	A
	ATOM	469	CD	ARG A 129	55.721	19.404	12.597	1.00	31.25	A
	ATOM	470	NE	ARG A 129	56.940	20.205	12.560	1.00	37.78	A
	ATOM	471	CZ	ARG A 129	56.962	21.524	12.391	1.00	40.10	A
	ATOM	472	NH1	ARG A 129	55.828	22.197	12.239	1.00	40.03	A
30	ATOM	473	NH2	ARG A 129	58.119	22.170	12.374	1.00	44.58	A
	ATOM	474	C	ARG A 129	55.288	16.186	9.729	1.00	20.08	A
	ATOM	475	O	ARG A 129	54.891	15.305	10.496	1.00	20.40	A
	ATOM	476	N	GLU A 130	54.553	16.654	8.724	1.00	18.79	A
	ATOM	477	CA	GLU A 130	53.222	16.125	8.454	1.00	20.10	A
35	ATOM	478	CB	GLU A 130	52.638	16.749	7.183	1.00	19.92	A
	ATOM	479	CG	GLU A 130	51.350	16.087	6.708	1.00	27.85	A
	ATOM	480	CD	GLU A 130	50.581	16.933	5.707	1.00	29.72	A
	ATOM	481	OE1	GLU A 130	51.216	17.528	4.814	1.00	33.46	A
	ATOM	482	OE2	GLU A 130	49.339	16.996	5.807	1.00	30.74	A
40	ATOM	483	C	GLU A 130	53.301	14.615	8.295	1.00	19.81	A
	ATOM	484	O	GLU A 130	52.553	13.875	8.935	1.00	18.37	A
	ATOM	485	N	ARG A 131	54.219	14.162	7.447	1.00	20.41	A
	ATOM	486	CA	ARG A 131	54.397	12.735	7.202	1.00	22.45	A
	ATOM	487	CB	ARG A 131	55.442	12.511	6.098	1.00	25.16	A
45	ATOM	488	CG	ARG A 131	55.742	11.043	5.840	1.00	28.75	A
	ATOM	489	CD	ARG A 131	56.736	10.837	4.708	1.00	33.75	A
	ATOM	490	NE	ARG A 131	57.020	9.415	4.520	1.00	40.07	A
	ATOM	491	CZ	ARG A 131	57.756	8.915	3.532	1.00	43.07	A
	ATOM	492	NH1	ARG A 131	58.293	9.721	2.625	1.00	44.91	A
50	ATOM	493	NH2	ARG A 131	57.955	7.606	3.449	1.00	44.45	A
	ATOM	494	C	ARG A 131	54.820	11.982	8.466	1.00	23.24	A
	ATOM	495	O	ARG A 131	54.241	10.948	8.804	1.00	23.86	A
	ATOM	496	N	ASP A 132	55.831	12.497	9.160	1.00	21.99	A
	ATOM	497	CA	ASP A 132	56.318	11.850	10.370	1.00	22.04	A
55	ATOM	498	CB	ASP A 132	57.570	12.564	10.888	1.00	23.72	A
	ATOM	499	CG	ASP A 132	58.750	12.442	9.932	1.00	27.77	A
	ATOM	500	OD1	ASP A 132	58.681	11.620	8.989	1.00	27.34	A
	ATOM	501	OD2	ASP A 132	59.753	13.163	10.128	1.00	28.70	A
	ATOM	502	C	ASP A 132	55.258	11.772	11.474	1.00	21.69	A

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     ATOM    503  O   ASP A 132      55.077  10.723  12.092  1.00 22.75           A
     ATOM    504  N   VAL A 133      54.551  12.868  11.725  1.00 19.54           A
     ATOM    505  CA  VAL A 133      53.525  12.843  12.759  1.00 18.52           A
     ATOM    506  CB  VAL A 133      52.908  14.244  12.990  1.00 19.26           A
  5  ATOM    507  CG1 VAL A 133      51.708  14.135  13.918  1.00 18.79           A
     ATOM    508  CG2 VAL A 133      53.953  15.180  13.604  1.00 18.80           A
     ATOM    509  C   VAL A 133      52.419  11.854  12.398  1.00 19.46           A
     ATOM    510  O   VAL A 133      52.073  10.991  13.200  1.00 19.94           A
     ATOM    511  N   MET A 134      51.878  11.957  11.187  1.00 19.15           A
 10  ATOM    512  CA  MET A 134      50.807  11.052  10.792  1.00 21.25           A
     ATOM    513  CB  MET A 134      50.309  11.381   9.383  1.00 17.34           A
     ATOM    514  CG  MET A 134      49.615  12.730   9.302  1.00 20.00           A
     ATOM    515  SD  MET A 134      48.643  12.952   7.798  1.00 24.21           A
     ATOM    516  CE  MET A 134      47.033  12.434   8.400  1.00 23.20           A
 15  ATOM    517  C   MET A 134      51.203   9.582  10.881  1.00 22.43           A
     ATOM    518  O   MET A 134      50.384   8.741  11.249  1.00 23.82           A
     ATOM    519  N   SER A 135      52.454   9.273  10.556  1.00 23.09           A
     ATOM    520  CA  SER A 135      52.939   7.895  10.615  1.00 26.13           A
     ATOM    521  CB  SER A 135      54.356   7.798  10.039  1.00 26.17           A
 20  ATOM    522  OG  SER A 135      54.383   8.177   8.673  1.00 21.91           A
     ATOM    523  C   SER A 135      52.957   7.358  12.045  1.00 26.58           A
     ATOM    524  O   SER A 135      52.926   6.148  12.261  1.00 26.42           A
     ATOM    525  N   ARG A 136      53.014   8.261  13.018  1.00 25.65           A
     ATOM    526  CA  ARG A 136      53.056   7.870  14.425  1.00 27.47           A
 25  ATOM    527  CB  ARG A 136      53.823   8.914  15.238  1.00 27.97           A
     ATOM    528  CG  ARG A 136      55.283   9.082  14.857  1.00 32.00           A
     ATOM    529  CD  ARG A 136      55.904  10.218  15.664  1.00 33.03           A
     ATOM    530  NE  ARG A 136      55.602  10.073  17.084  1.00 36.11           A
     ATOM    531  CZ  ARG A 136      55.867  10.990  18.007  1.00 39.74           A
 30  ATOM    532  NH1 ARG A 136      56.449  12.132  17.661  1.00 40.55           A
     ATOM    533  NH2 ARG A 136      55.540  10.769  19.276  1.00 36.72           A
     ATOM    534  C   ARG A 136      51.667   7.709  15.036  1.00 26.38           A
     ATOM    535  O   ARG A 136      51.516   7.121  16.106  1.00 27.06           A
     ATOM    536  N   LEU A 137      50.655   8.235  14.360  1.00 24.77           A
 35  ATOM    537  CA  LEU A 137      49.294   8.162  14.870  1.00 24.70           A
     ATOM    538  CB  LEU A 137      48.483   9.363  14.371  1.00 24.52           A
     ATOM    539  CG  LEU A 137      49.050  10.760  14.662  1.00 26.67           A
     ATOM    540  CD1 LEU A 137      48.075  11.813  14.141  1.00 27.25           A
     ATOM    541  CD2 LEU A 137      49.279  10.945  16.155  1.00 27.09           A
 40  ATOM    542  C   LEU A 137      48.592   6.868  14.473  1.00 25.20           A
     ATOM    543  O   LEU A 137      48.619   6.469  13.309  1.00 25.99           A
     ATOM    544  N   ASP A 138      47.971   6.218  15.451  1.00 21.89           A
     ATOM    545  CA  ASP A 138      47.239   4.977  15.219  1.00 21.35           A
     ATOM    546  CB  ASP A 138      48.124   3.761  15.523  1.00 22.14           A
 45  ATOM    547  CG  ASP A 138      47.432   2.448  15.201  1.00 24.90           A
     ATOM    548  OD1 ASP A 138      46.631   2.423  14.241  1.00 24.78           A
     ATOM    549  OD2 ASP A 138      47.691   1.443  15.897  1.00 25.39           A
     ATOM    550  C   ASP A 138      46.031   4.991  16.138  1.00 20.47           A
     ATOM    551  O   ASP A 138      45.967   4.248  17.118  1.00 19.06           A
 50  ATOM    552  N   HIS A 139      45.075   5.852  15.810  1.00 18.27           A
     ATOM    553  CA  HIS A 139      43.869   6.016  16.606  1.00 18.21           A
     ATOM    554  CB  HIS A 139      44.096   7.157  17.612  1.00 15.84           A
     ATOM    555  CG  HIS A 139      42.985   7.332  18.600  1.00 15.24           A
     ATOM    556  CD2 HIS A 139      42.884   6.964  19.900  1.00 13.97           A
 55  ATOM    557  ND1 HIS A 139      41.791   7.943  18.280  1.00 14.74           A
     ATOM    558  CE1 HIS A 139      41.002   7.944  19.341  1.00 14.19           A
     ATOM    559  NE2 HIS A 139      41.641   7.356  20.336  1.00 14.15           A
     ATOM    560  C   HIS A 139      42.715   6.330  15.654  1.00 18.50           A
     ATOM    561  O   HIS A 139      42.879   7.080  14.693  1.00 20.80           A
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      ATOM   562  N    PRO A 140      41.527    5.767   15.913  1.00 18.32      A
      ATOM   563  CD   PRO A 140      41.143    4.984   17.100  1.00 16.71      A
      ATOM   564  CA   PRO A 140      40.367    6.001   15.048  1.00 17.43      A
      ATOM   565  CB   PRO A 140      39.273    5.157   15.704  1.00 16.64      A
   5  ATOM   566  CG   PRO A 140      39.643    5.204   17.152  1.00 18.43      A
      ATOM   567  C    PRO A 140      39.914    7.441   14.803  1.00 18.77      A
      ATOM   568  O    PRO A 140      39.207    7.695   13.831  1.00 19.88      A
      ATOM   569  N    PHE A 141      40.301    8.381   15.664  1.00 17.14      A
      ATOM   570  CA   PHE A 141      39.874    9.767   15.477  1.00 16.42      A
  10  ATOM   571  CB   PHE A 141      39.568   10.422   16.836  1.00 14.60      A
      ATOM   572  CG   PHE A 141      38.386    9.817   17.556  1.00 15.26      A
      ATOM   573  CD1  PHE A 141      37.335    9.234   16.842  1.00 14.78      A
      ATOM   574  CD2  PHE A 141      38.297    9.880   18.942  1.00 13.70      A
      ATOM   575  CE1  PHE A 141      36.215    8.727   17.502  1.00 16.94      A
  15  ATOM   576  CE2  PHE A 141      37.178    9.375   19.615  1.00 15.75      A
      ATOM   577  CZ   PHE A 141      36.135    8.799   18.893  1.00 16.89      A
      ATOM   578  C    PHE A 141      40.857   10.641   14.694  1.00 16.15      A
      ATOM   579  O    PHE A 141      40.799   11.871   14.761  1.00 17.35      A
      ATOM   580  N    PHE A 142      41.748   10.011   13.941  1.00 15.88      A
  20  ATOM   581  CA   PHE A 142      42.727   10.756   13.154  1.00 17.89      A
      ATOM   582  CB   PHE A 142      44.115   10.645   13.793  1.00 17.57      A
      ATOM   583  CG   PHE A 142      44.240   11.371   15.103  1.00 18.74      A
      ATOM   584  CD1  PHE A 142      44.559   12.726   15.135  1.00 17.77      A
      ATOM   585  CD2  PHE A 142      43.997   10.711   16.304  1.00 18.74      A
  25  ATOM   586  CE1  PHE A 142      44.632   13.417   16.347  1.00 15.77      A
      ATOM   587  CE2  PHE A 142      44.065   11.393   17.522  1.00 17.56      A
      ATOM   588  CZ   PHE A 142      44.383   12.747   17.542  1.00 17.14      A
      ATOM   589  C    PHE A 142      42.793   10.231   11.729  1.00 19.12      A
      ATOM   590  O    PHE A 142      42.659    9.030   11.504  1.00 20.01      A
  30  ATOM   591  N    VAL A 143      42.978   11.135   10.769  1.00 18.72      A
      ATOM   592  CA   VAL A 143      43.102   10.735    9.371  1.00 18.52      A
      ATOM   593  CB   VAL A 143      43.294   11.961    8.440  1.00 20.66      A
      ATOM   594  CG1  VAL A 143      43.843   11.521    7.080  1.00 21.29      A
      ATOM   595  CG2  VAL A 143      41.958   12.673    8.252  1.00 22.97      A
  35  ATOM   596  C    VAL A 143      44.342    9.865    9.330  1.00 18.68      A
      ATOM   597  O    VAL A 143      45.355   10.199    9.943  1.00 18.42      A
      ATOM   598  N    LYS A 144      44.259    8.745    8.623  1.00 18.30      A
      ATOM   599  CA   LYS A 144      45.384    7.824    8.535  1.00 18.78      A
      ATOM   600  CB   LYS A 144      44.889    6.373    8.608  1.00 22.27      A
  40  ATOM   601  CG   LYS A 144      46.017    5.340    8.557  1.00 29.72      A
      ATOM   602  CD   LYS A 144      45.491    3.912    8.674  1.00 34.16      A
      ATOM   603  CE   LYS A 144      46.631    2.896    8.577  1.00 37.67      A
      ATOM   604  NZ   LYS A 144      46.138    1.484    8.629  1.00 39.02      A
      ATOM   605  C    LYS A 144      46.192    8.002    7.261  1.00 18.53      A
  45  ATOM   606  O    LYS A 144      45.643    8.314    6.200  1.00 18.18      A
      ATOM   607  N    LEU A 145      47.502    7.816    7.385  1.00 16.79      A
      ATOM   608  CA   LEU A 145      48.411    7.900    6.251  1.00 17.45      A
      ATOM   609  CB   LEU A 145      49.686    8.653    6.641  1.00 18.82      A
      ATOM   610  CG   LEU A 145      50.734    8.902    5.549  1.00 20.23      A
  50  ATOM   611  CD1  LEU A 145      51.836    9.799    6.093  1.00 18.83      A
      ATOM   612  CD2  LEU A 145      51.317    7.581    5.069  1.00 19.79      A
      ATOM   613  C    LEU A 145      48.739    6.450    5.907  1.00 19.19      A
      ATOM   614  O    LEU A 145      49.451    5.772    6.659  1.00 17.36      A
      ATOM   615  N    TYR A 146      48.215    5.972    4.782  1.00 17.28      A
  55  ATOM   616  CA   TYR A 146      48.444    4.593    4.358  1.00 17.57      A
      ATOM   617  CB   TYR A 146      47.288    4.098    3.486  1.00 17.74      A
      ATOM   618  CG   TYR A 146      45.981    3.926    4.214  1.00 17.50      A
      ATOM   619  CD1  TYR A 146      45.099    4.995    4.377  1.00 16.50      A
      ATOM   620  CE1  TYR A 146      43.881    4.827    5.039  1.00 17.10      A
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     ATOM    621  CD2 TYR A 146     45.620   2.686   4.735  1.00 18.28      A
     ATOM    622  CE2 TYR A 146     44.411   2.506   5.399  1.00 19.84      A
     ATOM    623  CZ  TYR A 146     43.547   3.576   5.544  1.00 17.53      A
     ATOM    624  OH  TYR A 146     42.342   3.376   6.169  1.00 20.67      A
  5  ATOM    625  C   TYR A 146     49.735   4.376   3.582  1.00 18.72      A
     ATOM    626  O   TYR A 146     50.382   3.338   3.715  1.00 19.51      A
     ATOM    627  N   PHE A 147     50.110   5.350   2.765  1.00 18.09      A
     ATOM    628  CA  PHE A 147     51.307   5.203   1.952  1.00 17.20      A
     ATOM    629  CB  PHE A 147     51.007   4.258   0.783  1.00 16.77      A
 10  ATOM    630  CG  PHE A 147     49.835   4.699  -0.070  1.00 17.75      A
     ATOM    631  CD1 PHE A 147     49.967   5.752  -0.975  1.00 16.58      A
     ATOM    632  CD2 PHE A 147     48.595   4.075   0.053  1.00 18.07      A
     ATOM    633  CE1 PHE A 147     48.886   6.178  -1.742  1.00 19.62      A
     ATOM    634  CE2 PHE A 147     47.503   4.492  -0.710  1.00 18.56      A
 15  ATOM    635  CZ  PHE A 147     47.647   5.546  -1.610  1.00 19.27      A
     ATOM    636  C   PHE A 147     51.768   6.533   1.395  1.00 17.13      A
     ATOM    637  O   PHE A 147     51.045   7.528   1.452  1.00 14.43      A
     ATOM    638  N   THR A 148     52.981   6.534   0.854  1.00 17.12      A
     ATOM    639  CA  THR A 148     53.541   7.718   0.232  1.00 17.96      A
 20  ATOM    640  CB  THR A 148     54.449   8.531   1.197  1.00 21.51      A
     ATOM    641  OG1 THR A 148     55.605   7.760   1.537  1.00 18.83      A
     ATOM    642  CG2 THR A 148     53.700   8.897   2.472  1.00 19.60      A
     ATOM    643  C   THR A 148     54.386   7.262  -0.946  1.00 20.31      A
     ATOM    644  O   THR A 148     54.860   6.124  -0.991  1.00 18.94      A
 25  ATOM    645  N   PHE A 149     54.543   8.149  -1.916  1.00 19.16      A
     ATOM    646  CA  PHE A 149     55.368   7.877  -3.073  1.00 18.01      A
     ATOM    647  CB  PHE A 149     54.748   6.801  -3.989  1.00 17.23      A
     ATOM    648  CG  PHE A 149     53.389   7.144  -4.544  1.00 16.88      A
     ATOM    649  CD1 PHE A 149     53.262   7.888  -5.712  1.00 18.58      A
 30  ATOM    650  CD2 PHE A 149     52.235   6.668  -3.927  1.00 17.31      A
     ATOM    651  CE1 PHE A 149     52.007   8.149  -6.267  1.00 19.26      A
     ATOM    652  CE2 PHE A 149     50.972   6.923  -4.470  1.00 19.17      A
     ATOM    653  CZ  PHE A 149     50.858   7.663  -5.642  1.00 19.60      A
     ATOM    654  C   PHE A 149     55.542   9.205  -3.774  1.00 20.85      A
 35  ATOM    655  O   PHE A 149     54.934  10.200  -3.376  1.00 19.76      A
     ATOM    656  N   GLN A 150     56.398   9.241  -4.782  1.00 19.79      A
     ATOM    657  CA  GLN A 150     56.636  10.481  -5.497  1.00 24.03      A
     ATOM    658  CB  GLN A 150     57.659  11.347  -4.739  1.00 24.45      A
     ATOM    659  CG  GLN A 150     58.986  10.645  -4.414  1.00 26.28      A
 40  ATOM    660  CD  GLN A 150     59.988  11.558  -3.692  1.00 29.02      A
     ATOM    661  OE1 GLN A 150     60.693  12.353  -4.321  1.00 27.05      A
     ATOM    662  NE2 GLN A 150     60.042  11.449  -2.365  1.00 26.47      A
     ATOM    663  C   GLN A 150     57.160  10.203  -6.885  1.00 23.88      A
     ATOM    664  O   GLN A 150     57.673   9.118  -7.158  1.00 24.79      A
 45  ATOM    665  N   ASP A 151     56.987  11.171  -7.774  1.00 25.88      A
     ATOM    666  CA  ASP A 151     57.527  11.047  -9.117  1.00 26.49      A
     ATOM    667  CB  ASP A 151     56.437  11.126 -10.199  1.00 24.54      A
     ATOM    668  CG  ASP A 151     55.544  12.336 -10.064  1.00 24.95      A
     ATOM    669  OD1 ASP A 151     56.005  13.379  -9.561  1.00 22.44      A
 50  ATOM    670  OD2 ASP A 151     54.369  12.242 -10.490  1.00 25.72      A
     ATOM    671  C   ASP A 151     58.515  12.203  -9.220  1.00 28.63      A
     ATOM    672  O   ASP A 151     58.890  12.780  -8.194  1.00 27.83      A
     ATOM    673  N   ASP A 152     58.934  12.560 -10.426  1.00 29.21      A
     ATOM    674  CA  ASP A 152     59.907  13.636 -10.562  1.00 31.88      A
 55  ATOM    675  CB  ASP A 152     60.325  13.792 -12.026  1.00 33.94      A
     ATOM    676  CG  ASP A 152     61.033  12.564 -12.557  1.00 38.88      A
     ATOM    677  OD1 ASP A 152     61.817  11.959 -11.791  1.00 39.67      A
     ATOM    678  OD2 ASP A 152     60.817  12.211 -13.738  1.00 41.57      A
     ATOM    679  C   ASP A 152     59.487  14.994 -10.013  1.00 30.90      A
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	ATOM	680	O	ASP A 152	60.316	15.735	-9.482	1.00 31.69	A
	ATOM	681	N	GLU A 153	58.207	15.322	-10.107	1.00 29.44	A
	ATOM	682	CA	GLU A 153	57.767	16.632	-9.646	1.00 28.69	A
	ATOM	683	CB	GLU A 153	56.984	17.327	-10.766	1.00 32.90	A
5	ATOM	684	CG	GLU A 153	57.451	16.987	-12.183	1.00 40.57	A
	ATOM	685	CD	GLU A 153	56.920	15.643	-12.675	1.00 45.78	A
	ATOM	686	OE1	GLU A 153	55.682	15.482	-12.760	1.00 48.91	A
	ATOM	687	OE2	GLU A 153	57.736	14.747	-12.979	1.00 48.95	A
	ATOM	688	C	GLU A 153	56.929	16.683	-8.372	1.00 26.43	A
10	ATOM	689	O	GLU A 153	56.947	17.688	-7.660	1.00 25.08	A
	ATOM	690	N	LYS A 154	56.205	15.610	-8.069	1.00 22.39	A
	ATOM	691	CA	LYS A 154	55.318	15.631	-6.912	1.00 21.43	A
	ATOM	692	CB	LYS A 154	53.861	15.628	-7.398	1.00 20.33	A
	ATOM	693	CG	LYS A 154	53.505	16.716	-8.403	1.00 21.92	A
15	ATOM	694	CD	LYS A 154	52.211	16.375	-9.146	1.00 19.70	A
	ATOM	695	CE	LYS A 154	51.775	17.503	-10.077	1.00 20.04	A
	ATOM	696	NZ	LYS A 154	50.631	17.094	-10.951	1.00 19.97	A
	ATOM	697	C	LYS A 154	55.458	14.522	-5.881	1.00 20.43	A
	ATOM	698	O	LYS A 154	55.949	13.426	-6.173	1.00 21.13	A
20	ATOM	699	N	LEU A 155	54.985	14.832	-4.676	1.00 19.69	A
	ATOM	700	CA	LEU A 155	54.950	13.900	-3.553	1.00 19.10	A
	ATOM	701	CB	LEU A 155	55.362	14.588	-2.252	1.00 19.65	A
	ATOM	702	CG	LEU A 155	56.740	15.234	-2.129	1.00 21.20	A
	ATOM	703	CD1	LEU A 155	56.848	15.918	-0.770	1.00 23.42	A
25	ATOM	704	CD2	LEU A 155	57.816	14.174	-2.277	1.00 23.08	A
	ATOM	705	C	LEU A 155	53.478	13.507	-3.427	1.00 18.87	A
	ATOM	706	O	LEU A 155	52.600	14.348	-3.620	1.00 18.61	A
	ATOM	707	N	TYR A 156	53.209	12.249	-3.091	1.00 15.02	A
	ATOM	708	CA	TYR A 156	51.834	11.783	-2.934	1.00 16.29	A
30	ATOM	709	CB	TYR A 156	51.470	10.769	-4.029	1.00 14.20	A
	ATOM	710	CG	TYR A 156	51.603	11.273	-5.449	1.00 17.29	A
	ATOM	711	CD1	TYR A 156	52.857	11.429	-6.045	1.00 16.46	A
	ATOM	712	CE1	TYR A 156	52.978	11.884	-7.360	1.00 18.68	A
	ATOM	713	CD2	TYR A 156	50.474	11.588	-6.202	1.00 16.43	A
35	ATOM	714	CE2	TYR A 156	50.583	12.048	-7.512	1.00 16.31	A
	ATOM	715	CZ	TYR A 156	51.835	12.192	-8.083	1.00 18.17	A
	ATOM	716	OH	TYR A 156	51.941	12.651	-9.371	1.00 17.47	A
	ATOM	717	C	TYR A 156	51.657	11.108	-1.572	1.00 16.32	A
	ATOM	718	O	TYR A 156	52.412	10.197	-1.235	1.00 16.27	A
40	ATOM	719	N	PHE A 157	50.678	11.568	-0.792	1.00 15.47	A
	ATOM	720	CA	PHE A 157	50.385	10.966	0.508	1.00 16.66	A
	ATOM	721	CB	PHE A 157	50.324	12.014	1.629	1.00 16.91	A
	ATOM	722	CG	PHE A 157	51.631	12.708	1.907	1.00 18.96	A
	ATOM	723	CD1	PHE A 157	52.821	12.261	1.340	1.00 20.31	A
45	ATOM	724	CD2	PHE A 157	51.664	13.829	2.732	1.00 21.12	A
	ATOM	725	CE1	PHE A 157	54.025	12.926	1.585	1.00 22.08	A
	ATOM	726	CE2	PHE A 157	52.865	14.500	2.982	1.00 22.18	A
	ATOM	727	CZ	PHE A 157	54.045	14.045	2.405	1.00 21.27	A
	ATOM	728	C	PHE A 157	49.016	10.308	0.404	1.00 16.52	A
50	ATOM	729	O	PHE A 157	48.029	10.979	0.110	1.00 17.32	A
	ATOM	730	N	GLY A 158	48.953	9.002	0.644	1.00 15.97	A
	ATOM	731	CA	GLY A 158	47.684	8.299	0.572	1.00 16.13	A
	ATOM	732	C	GLY A 158	47.000	8.383	1.920	1.00 14.94	A
	ATOM	733	O	GLY A 158	47.445	7.756	2.879	1.00 16.28	A
55	ATOM	734	N	LEU A 159	45.915	9.145	1.989	1.00 13.50	A
	ATOM	735	CA	LEU A 159	45.191	9.340	3.241	1.00 15.20	A
	ATOM	736	CB	LEU A 159	45.031	10.835	3.517	1.00 14.20	A
	ATOM	737	CG	LEU A 159	46.270	11.726	3.385	1.00 19.00	A
	ATOM	738	CD1	LEU A 159	45.847	13.188	3.477	1.00 17.12	A

ATOM	739	CD2	LEU	A	159	47.275	11.390	4.471	1.00	14.71	A
ATOM	740	C	LEU	A	159	43.809	8.716	3.232	1.00	15.53	A
ATOM	741	O	LEU	A	159	43.232	8.472	2.177	1.00	16.05	A
ATOM	742	N	SER	A	160	43.268	8.469	4.418	1.00	15.86	A
ATOM	743	CA	SER	A	160	41.932	7.917	4.498	1.00	19.01	A
ATOM	744	CB	SER	A	160	41.566	7.582	5.949	1.00	22.90	A
ATOM	745	OG	SER	A	160	41.901	8.629	6.833	1.00	24.18	A
ATOM	746	C	SER	A	160	40.987	8.968	3.924	1.00	20.43	A
ATOM	747	O	SER	A	160	41.213	10.173	4.062	1.00	19.96	A
ATOM	748	N	TYR	A	161	39.945	8.508	3.250	1.00	19.20	A
ATOM	749	CA	TYR	A	161	38.975	9.406	2.644	1.00	20.37	A
ATOM	750	CB	TYR	A	161	38.471	8.785	1.332	1.00	20.00	A
ATOM	751	CG	TYR	A	161	37.314	9.502	0.666	1.00	20.72	A
ATOM	752	CD1	TYR	A	161	37.222	10.895	0.682	1.00	18.22	A
ATOM	753	CE1	TYR	A	161	36.180	11.557	0.029	1.00	22.24	A
ATOM	754	CD2	TYR	A	161	36.333	8.784	-0.020	1.00	20.53	A
ATOM	755	CE2	TYR	A	161	35.287	9.436	-0.678	1.00	24.24	A
ATOM	756	CZ	TYR	A	161	35.218	10.822	-0.648	1.00	22.32	A
ATOM	757	OH	TYR	A	161	34.194	11.471	-1.298	1.00	23.03	A
ATOM	758	C	TYR	A	161	37.812	9.681	3.598	1.00	20.14	A
ATOM	759	O	TYR	A	161	36.959	8.819	3.810	1.00	19.53	A
ATOM	760	N	ALA	A	162	37.791	10.880	4.178	1.00	19.92	A
ATOM	761	CA	ALA	A	162	36.721	11.271	5.099	1.00	21.07	A
ATOM	762	CB	ALA	A	162	37.187	12.419	6.002	1.00	19.60	A
ATOM	763	C	ALA	A	162	35.542	11.712	4.238	1.00	22.07	A
ATOM	764	O	ALA	A	162	35.436	12.875	3.860	1.00	20.66	A
ATOM	765	N	LYS	A	163	34.653	10.769	3.945	1.00	23.27	A
ATOM	766	CA	LYS	A	163	33.503	11.017	3.080	1.00	27.12	A
ATOM	767	CB	LYS	A	163	32.663	9.741	2.963	1.00	29.68	A
ATOM	768	CG	LYS	A	163	33.455	8.524	2.515	1.00	37.67	A
ATOM	769	CD	LYS	A	163	32.556	7.310	2.321	1.00	42.24	A
ATOM	770	CE	LYS	A	163	33.373	6.034	2.185	1.00	44.48	A
ATOM	771	NZ	LYS	A	163	34.143	5.735	3.430	1.00	44.88	A
ATOM	772	C	LYS	A	163	32.581	12.186	3.411	1.00	25.78	A
ATOM	773	O	LYS	A	163	32.103	12.863	2.506	1.00	26.53	A
ATOM	774	N	ASN	A	164	32.327	12.441	4.689	1.00	24.57	A
ATOM	775	CA	ASN	A	164	31.420	13.522	5.033	1.00	23.77	A
ATOM	776	CB	ASN	A	164	30.610	13.129	6.265	1.00	25.02	A
ATOM	777	CG	ASN	A	164	29.537	12.101	5.932	1.00	27.54	A
ATOM	778	OD1	ASN	A	164	28.772	12.281	4.983	1.00	28.79	A
ATOM	779	ND2	ASN	A	164	29.475	11.024	6.704	1.00	27.13	A
ATOM	780	C	ASN	A	164	31.999	14.931	5.169	1.00	24.43	A
ATOM	781	O	ASN	A	164	31.306	15.856	5.589	1.00	23.98	A
ATOM	782	N	GLY	A	165	33.262	15.097	4.795	1.00	21.56	A
ATOM	783	CA	GLY	A	165	33.873	16.414	4.836	1.00	24.39	A
ATOM	784	C	GLY	A	165	34.191	17.043	6.181	1.00	23.62	A
ATOM	785	O	GLY	A	165	34.380	16.352	7.177	1.00	23.26	A
ATOM	786	N	GLU	A	166	34.234	18.373	6.186	1.00	23.22	A
ATOM	787	CA	GLU	A	166	34.563	19.176	7.362	1.00	24.54	A
ATOM	788	CB	GLU	A	166	35.055	20.558	6.913	1.00	25.04	A
ATOM	789	CG	GLU	A	166	36.419	20.569	6.229	1.00	26.48	A
ATOM	790	CD	GLU	A	166	36.699	21.889	5.517	1.00	30.02	A
ATOM	791	OE1	GLU	A	166	36.081	22.906	5.889	1.00	29.33	A
ATOM	792	OE2	GLU	A	166	37.544	21.916	4.596	1.00	30.48	A
ATOM	793	C	GLU	A	166	33.436	19.372	8.369	1.00	24.44	A
ATOM	794	O	GLU	A	166	32.279	19.541	8.001	1.00	22.76	A
ATOM	795	N	LEU	A	167	33.791	19.370	9.649	1.00	22.95	A
ATOM	796	CA	LEU	A	167	32.813	19.581	10.707	1.00	22.26	A
ATOM	797	CB	LEU	A	167	33.497	19.481	12.073	1.00	22.32	A

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     ATOM    798  CG  LEU A 167      32.706  19.923  13.306  1.00 22.04      A
     ATOM    799  CD1 LEU A 167      31.454  19.074  13.463  1.00 19.66      A
     ATOM    800  CD2 LEU A 167      33.597  19.805  14.537  1.00 21.17      A
     ATOM    801  C   LEU A 167      32.193  20.971  10.529  1.00 23.49      A
  5  ATOM    802  O   LEU A 167      31.047  21.209  10.907  1.00 23.56      A
     ATOM    803  N   LEU A 168      32.960  21.887   9.948  1.00 24.25      A
     ATOM    804  CA  LEU A 168      32.473  23.245   9.722  1.00 26.64      A
     ATOM    805  CB  LEU A 168      33.560  24.099   9.066  1.00 25.62      A
     ATOM    806  CG  LEU A 168      33.198  25.546   8.707  1.00 27.34      A
 10  ATOM    807  CD1 LEU A 168      32.718  26.296   9.946  1.00 26.42      A
     ATOM    808  CD2 LEU A 168      34.418  26.238   8.119  1.00 26.74      A
     ATOM    809  C   LEU A 168      31.234  23.218   8.829  1.00 27.13      A
     ATOM    810  O   LEU A 168      30.297  23.989   9.030  1.00 26.01      A
     ATOM    811  N   LYS A 169      31.233  22.320   7.848  1.00 26.41      A
 15  ATOM    812  CA  LYS A 169      30.106  22.210   6.934  1.00 27.70      A
     ATOM    813  CB  LYS A 169      30.324  21.064   5.945  1.00 30.49      A
     ATOM    814  CG  LYS A 169      29.151  20.854   4.993  1.00 32.47      A
     ATOM    815  CD  LYS A 169      29.407  19.728   3.998  1.00 35.98      A
     ATOM    816  CE  LYS A 169      29.462  18.372   4.683  1.00 38.53      A
 20  ATOM    817  NZ  LYS A 169      29.622  17.263   3.702  1.00 41.00      A
     ATOM    818  C   LYS A 169      28.801  21.985   7.682  1.00 28.12      A
     ATOM    819  O   LYS A 169      27.785  22.608   7.371  1.00 28.08      A
     ATOM    820  N   TYR A 170      28.826  21.094   8.668  1.00 26.53      A
     ATOM    821  CA  TYR A 170      27.624  20.791   9.434  1.00 26.95      A
 25  ATOM    822  CB  TYR A 170      27.810  19.476  10.193  1.00 25.03      A
     ATOM    823  CG  TYR A 170      27.898  18.300   9.251  1.00 26.65      A
     ATOM    824  CD1 TYR A 170      26.745  17.661   8.790  1.00 28.27      A
     ATOM    825  CE1 TYR A 170      26.814  16.642   7.839  1.00 26.85      A
     ATOM    826  CD2 TYR A 170      29.127  17.884   8.742  1.00 27.83      A
 30  ATOM    827  CE2 TYR A 170      29.209  16.869   7.792  1.00 27.19      A
     ATOM    828  CZ  TYR A 170      28.049  16.254   7.343  1.00 30.02      A
     ATOM    829  OH  TYR A 170      28.130  15.268   6.382  1.00 29.23      A
     ATOM    830  C   TYR A 170      27.229  21.918  10.376  1.00 27.59      A
     ATOM    831  O   TYR A 170      26.045  22.122  10.642  1.00 29.25      A
 35  ATOM    832  N   ILE A 171      28.208  22.660  10.882  1.00 28.16      A
     ATOM    833  CA  ILE A 171      27.883  23.770  11.763  1.00 29.03      A
     ATOM    834  CB  ILE A 171      29.151  24.435  12.337  1.00 27.51      A
     ATOM    835  CG2 ILE A 171      28.773  25.705  13.084  1.00 27.97      A
     ATOM    836  CG1 ILE A 171      29.872  23.458  13.272  1.00 26.70      A
 40  ATOM    837  CD1 ILE A 171      31.163  23.996  13.856  1.00 24.07      A
     ATOM    838  C   ILE A 171      27.094  24.796  10.944  1.00 31.41      A
     ATOM    839  O   ILE A 171      26.088  25.335  11.407  1.00 31.69      A
     ATOM    840  N   ARG A 172      27.546  25.047   9.719  1.00 33.21      A
     ATOM    841  CA  ARG A 172      26.874  26.000   8.844  1.00 36.54      A
 45  ATOM    842  CB  ARG A 172      27.734  26.314   7.616  1.00 37.73      A
     ATOM    843  CG  ARG A 172      29.057  27.011   7.912  1.00 41.65      A
     ATOM    844  CD  ARG A 172      29.708  27.492   6.616  1.00 45.29      A
     ATOM    845  NE  ARG A 172      31.037  28.070   6.812  1.00 48.51      A
     ATOM    846  CZ  ARG A 172      31.314  29.059   7.658  1.00 51.53      A
 50  ATOM    847  NH1 ARG A 172      30.355  29.593   8.406  1.00 53.75      A
     ATOM    848  NH2 ARG A 172      32.553  29.526   7.748  1.00 51.21      A
     ATOM    849  C   ARG A 172      25.528  25.459   8.378  1.00 37.67      A
     ATOM    850  O   ARG A 172      24.550  26.200   8.288  1.00 39.09      A
     ATOM    851  N   LYS A 173      25.481  24.163   8.092  1.00 38.44      A
 55  ATOM    852  CA  LYS A 173      24.259  23.528   7.619  1.00 39.25      A
     ATOM    853  CB  LYS A 173      24.523  22.061   7.272  1.00 41.89      A
     ATOM    854  CG  LYS A 173      23.279  21.298   6.830  1.00 45.52      A
     ATOM    855  CD  LYS A 173      23.557  19.808   6.653  1.00 49.60      A
     ATOM    856  CE  LYS A 173      24.477  19.530   5.469  1.00 52.63      A
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      ATOM   857  NZ   LYS A 173    23.855  19.894   4.160  1.00 54.61     A
      ATOM   858  C    LYS A 173    23.089  23.608   8.595  1.00 39.30     A
      ATOM   859  O    LYS A 173    21.981  23.960   8.201  1.00 39.62     A
      ATOM   860  N    ILE A 174    23.320  23.282   9.863  1.00 37.96     A
 5    ATOM   861  CA   ILE A 174    22.229  23.314  10.833  1.00 37.36     A
      ATOM   862  CB   ILE A 174    22.159  21.998  11.652  1.00 37.44     A
      ATOM   863  CG2  ILE A 174    22.058  20.802  10.709  1.00 38.37     A
      ATOM   864  CG1  ILE A 174    23.397  21.850  12.532  1.00 37.25     A
      ATOM   865  CD1  ILE A 174    23.355  20.620  13.418  1.00 36.85     A
10    ATOM   866  C    ILE A 174    22.259  24.492  11.801  1.00 36.71     A
      ATOM   867  O    ILE A 174    21.448  24.556  12.724  1.00 38.05     A
      ATOM   868  N    GLY A 175    23.185  25.423  11.592  1.00 35.48     A
      ATOM   869  CA   GLY A 175    23.265  26.585  12.462  1.00 35.29     A
      ATOM   870  C    GLY A 175    24.053  26.360  13.737  1.00 35.06     A
15    ATOM   871  O    GLY A 175    25.066  27.019  13.970  1.00 37.46     A
      ATOM   872  N    SER A 176    23.581  25.441  14.571  1.00 33.94     A
      ATOM   873  CA   SER A 176    24.253  25.113  15.822  1.00 32.84     A
      ATOM   874  CB   SER A 176    23.938  26.155  16.901  1.00 33.54     A
      ATOM   875  OG   SER A 176    22.599  26.056  17.347  1.00 34.86     A
20    ATOM   876  C    SER A 176    23.796  23.731  16.276  1.00 32.34     A
      ATOM   877  O    SER A 176    22.726  23.263  15.884  1.00 32.82     A
      ATOM   878  N    PHE A 177    24.609  23.085  17.103  1.00 29.39     A
      ATOM   879  CA   PHE A 177    24.313  21.743  17.597  1.00 27.20     A
      ATOM   880  CB   PHE A 177    25.621  20.989  17.865  1.00 26.39     A
25    ATOM   881  CG   PHE A 177    26.372  20.585  16.622  1.00 26.18     A
      ATOM   882  CD1  PHE A 177    26.210  21.277  15.426  1.00 25.30     A
      ATOM   883  CD2  PHE A 177    27.266  19.516  16.662  1.00 26.05     A
      ATOM   884  CE1  PHE A 177    26.923  20.912  14.290  1.00 26.59     A
      ATOM   885  CE2  PHE A 177    27.986  19.143  15.532  1.00 26.06     A
30    ATOM   886  CZ   PHE A 177    27.815  19.841  14.343  1.00 25.42     A
      ATOM   887  C    PHE A 177    23.500  21.752  18.884  1.00 27.00     A
      ATOM   888  O    PHE A 177    23.704  22.610  19.747  1.00 26.48     A
      ATOM   889  N    ASP A 178    22.578  20.802  19.022  1.00 26.70     A
      ATOM   890  CA   ASP A 178    21.816  20.729  20.260  1.00 26.35     A
35    ATOM   891  CB   ASP A 178    20.621  19.773  20.142  1.00 29.90     A
      ATOM   892  CG   ASP A 178    21.020  18.372  19.720  1.00 32.28     A
      ATOM   893  OD1  ASP A 178    22.157  17.949  20.014  1.00 35.21     A
      ATOM   894  OD2  ASP A 178    20.179  17.683  19.105  1.00 34.79     A
      ATOM   895  C    ASP A 178    22.810  20.228  21.311  1.00 25.03     A
40    ATOM   896  O    ASP A 178    23.974  19.968  20.992  1.00 21.24     A
      ATOM   897  N    GLU A 179    22.361  20.083  22.552  1.00 23.60     A
      ATOM   898  CA   GLU A 179    23.247  19.644  23.619  1.00 25.18     A
      ATOM   899  CB   GLU A 179    22.542  19.770  24.971  1.00 27.60     A
      ATOM   900  CG   GLU A 179    23.324  19.176  26.130  1.00 32.58     A
45    ATOM   901  CD   GLU A 179    22.997  19.845  27.449  1.00 35.82     A
      ATOM   902  OE1  GLU A 179    21.825  20.224  27.645  1.00 35.95     A
      ATOM   903  OE2  GLU A 179    23.912  19.984  28.291  1.00 38.19     A
      ATOM   904  C    GLU A 179    23.808  18.235  23.450  1.00 24.08     A
      ATOM   905  O    GLU A 179    24.977  17.989  23.756  1.00 22.79     A
50    ATOM   906  N    THR A 180    22.983  17.316  22.961  1.00 23.36     A
      ATOM   907  CA   THR A 180    23.412  15.935  22.761  1.00 22.15     A
      ATOM   908  CB   THR A 180    22.224  15.054  22.320  1.00 23.77     A
      ATOM   909  OG1  THR A 180    21.222  15.075  23.341  1.00 26.37     A
      ATOM   910  CG2  THR A 180    22.670  13.616  22.088  1.00 22.66     A
55    ATOM   911  C    THR A 180    24.533  15.830  21.724  1.00 22.01     A
      ATOM   912  O    THR A 180    25.533  15.141  21.944  1.00 19.87     A
      ATOM   913  N    CYS A 181    24.365  16.511  20.596  1.00 21.21     A
      ATOM   914  CA   CYS A 181    25.372  16.480  19.541  1.00 22.22     A
      ATOM   915  CB   CYS A 181    24.800  17.065  18.250  1.00 24.62     A
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     ATOM   916  SG  CYS A 181      23.435  16.080  17.560  1.00 29.50      A
     ATOM   917  C   CYS A 181      26.633  17.232  19.954  1.00 23.07      A
     ATOM   918  O   CYS A 181      27.746  16.827  19.608  1.00 23.95      A
     ATOM   919  N   THR A 182      26.463  18.325  20.695  1.00 22.76      A
 5   ATOM   920  CA  THR A 182      27.606  19.103  21.161  1.00 21.49      A
     ATOM   921  CB  THR A 182      27.167  20.346  21.978  1.00 21.37      A
     ATOM   922  OG1 THR A 182      26.459  21.262  21.134  1.00 22.50      A
     ATOM   923  CG2 THR A 182      28.379  21.046  22.565  1.00 18.36      A
     ATOM   924  C   THR A 182      28.454  18.215  22.071  1.00 21.48      A
10   ATOM   925  O   THR A 182      29.669  18.090  21.894  1.00 19.95      A
     ATOM   926  N   ARG A 183      27.798  17.602  23.050  1.00 18.97      A
     ATOM   927  CA  ARG A 183      28.468  16.723  23.996  1.00 19.39      A
     ATOM   928  CB  ARG A 183      27.455  16.140  24.984  1.00 19.46      A
     ATOM   929  CG  ARG A 183      28.030  15.062  25.887  1.00 18.77      A
15   ATOM   930  CD  ARG A 183      27.021  14.571  26.925  1.00 21.19      A
     ATOM   931  NE  ARG A 183      26.605  15.642  27.824  1.00 19.46      A
     ATOM   932  CZ  ARG A 183      25.496  16.362  27.679  1.00 20.45      A
     ATOM   933  NH1 ARG A 183      24.672  16.123  26.666  1.00 19.81      A
     ATOM   934  NH2 ARG A 183      25.224  17.338  28.539  1.00 17.11      A
20   ATOM   935  C   ARG A 183      29.206  15.577  23.302  1.00 20.02      A
     ATOM   936  O   ARG A 183      30.383  15.333  23.573  1.00 19.97      A
     ATOM   937  N   PHE A 184      28.520  14.871  22.409  1.00 19.24      A
     ATOM   938  CA  PHE A 184      29.144  13.746  21.722  1.00 18.04      A
     ATOM   939  CB  PHE A 184      28.158  13.078  20.764  1.00 21.05      A
25   ATOM   940  CG  PHE A 184      28.719  11.857  20.098  1.00 22.67      A
     ATOM   941  CD1 PHE A 184      28.717  10.630  20.754  1.00 22.97      A
     ATOM   942  CD2 PHE A 184      29.317  11.949  18.850  1.00 19.97      A
     ATOM   943  CE1 PHE A 184      29.308   9.510  20.176  1.00 23.53      A
     ATOM   944  CE2 PHE A 184      29.915  10.833  18.263  1.00 24.11      A
30   ATOM   945  CZ  PHE A 184      29.910   9.613  18.928  1.00 22.97      A
     ATOM   946  C   PHE A 184      30.403  14.127  20.941  1.00 17.99      A
     ATOM   947  O   PHE A 184      31.461  13.531  21.130  1.00 18.89      A
     ATOM   948  N   TYR A 185      30.292  15.110  20.056  1.00 15.73      A
     ATOM   949  CA  TYR A 185      31.443  15.519  19.265  1.00 15.72      A
35   ATOM   950  CB  TYR A 185      30.992  16.413  18.111  1.00 17.33      A
     ATOM   951  CG  TYR A 185      30.364  15.584  17.015  1.00 19.37      A
     ATOM   952  CD1 TYR A 185      31.159  14.809  16.168  1.00 16.53      A
     ATOM   953  CE1 TYR A 185      30.590  13.952  15.232  1.00 18.12      A
     ATOM   954  CD2 TYR A 185      28.976  15.484  16.892  1.00 18.18      A
40   ATOM   955  CE2 TYR A 185      28.398  14.623  15.956  1.00 18.90      A
     ATOM   956  CZ  TYR A 185      29.211  13.861  15.133  1.00 18.41      A
     ATOM   957  OH  TYR A 185      28.650  12.995  14.218  1.00 20.48      A
     ATOM   958  C   TYR A 185      32.544  16.172  18.445  1.00 15.79      A
     ATOM   959  O   TYR A 185      33.720  16.015  19.766  1.00 17.69      A
45   ATOM   960  N   THR A 186      32.176  16.887  21.142  1.00 15.68      A
     ATOM   961  CA  THR A 186      33.184  17.504  21.997  1.00 16.03      A
     ATOM   962  CB  THR A 186      32.559  18.403  23.094  1.00 16.62      A
     ATOM   963  OG1 THR A 186      31.866  19.503  22.481  1.00 14.79      A
     ATOM   964  CG2 THR A 186      33.656  18.953  24.019  1.00 14.68      A
50   ATOM   965  C   THR A 186      33.954  16.375  22.680  1.00 15.59      A
     ATOM   966  O   THR A 186      35.176  16.443  22.823  1.00 13.77      A
     ATOM   967  N   ALA A 187      33.234  15.333  23.097  1.00 14.06      A
     ATOM   968  CA  ALA A 187      33.869  14.196  23.757  1.00 14.74      A
     ATOM   969  CB  ALA A 187      32.810  13.195  24.224  1.00 14.32      A
55   ATOM   970  C   ALA A 187      34.875  13.509  22.821  1.00 14.41      A
     ATOM   971  O   ALA A 187      35.972  13.136  23.247  1.00 15.61      A
     ATOM   972  N   GLU A 188      34.516  13.340  21.549  1.00 14.01      A
     ATOM   973  CA  GLU A 188      35.443  12.704  20.615  1.00 13.50      A
     ATOM   974  CB  GLU A 188      34.782  12.449  19.251  1.00 12.85      A
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      ATOM    975  CG   GLU A 188      33.622  11.454  19.282  1.00 12.71        A
      ATOM    976  CD   GLU A 188      33.464  10.685  17.979  1.00 15.01        A
      ATOM    977  OE1  GLU A 188      33.687  11.275  16.899  1.00 13.21        A
      ATOM    978  OE2  GLU A 188      33.110   9.484  18.031  1.00 17.69        A
  5   ATOM    979  C    GLU A 188      36.682  13.582  20.436  1.00 13.34        A
      ATOM    980  O    GLU A 188      37.803  13.085  20.408  1.00 14.69        A
      ATOM    981  N    ILE A 189      36.486  14.893  20.326  1.00 13.52        A
      ATOM    982  CA   ILE A 189      37.627  15.787  20.159  1.00 13.35        A
      ATOM    983  CB   ILE A 189      37.169  17.247  19.939  1.00 13.95        A
 10   ATOM    984  CG2  ILE A 189      38.381  18.165  19.822  1.00 12.47        A
      ATOM    985  CG1  ILE A 189      36.302  17.332  18.671  1.00 13.44        A
      ATOM    986  CD1  ILE A 189      35.588  18.664  18.491  1.00 14.29        A
      ATOM    987  C    ILE A 189      38.530  15.702  21.394  1.00 14.63        A
      ATOM    988  O    ILE A 189      39.753  15.595  21.271  1.00 12.97        A
 15   ATOM    989  N    VAL A 190      37.927  15.751  22.582  1.00 14.35        A
      ATOM    990  CA   VAL A 190      38.684  15.655  23.832  1.00 13.22        A
      ATOM    991  CB   VAL A 190      37.743  15.690  25.061  1.00 14.28        A
      ATOM    992  CG1  VAL A 190      38.509  15.267  26.326  1.00 15.08        A
      ATOM    993  CG2  VAL A 190      37.160  17.082  25.233  1.00 12.08        A
 20   ATOM    994  C    VAL A 190      39.468  14.338  23.859  1.00 14.61        A
      ATOM    995  O    VAL A 190      40.634  14.304  24.250  1.00 13.72        A
      ATOM    996  N    SER A 191      38.825  13.254  23.432  1.00 15.26        A
      ATOM    997  CA   SER A 191      39.478  11.943  23.421  1.00 16.81        A
      ATOM    998  CB   SER A 191      38.470  10.857  23.041  1.00 16.14        A
 25   ATOM    999  OG   SER A 191      39.018   9.569  23.238  1.00 16.94        A
      ATOM   1000  C    SER A 191      40.649  11.928  22.441  1.00 16.58        A
      ATOM   1001  O    SER A 191      41.697  11.335  22.713  1.00 13.96        A
      ATOM   1002  N    ALA A 192      40.468  12.586  21.300  1.00 15.26        A
      ATOM   1003  CA   ALA A 192      41.518  12.645  20.292  1.00 14.37        A
 30   ATOM   1004  CB   ALA A 192      40.989  13.296  19.016  1.00 14.43        A
      ATOM   1005  C    ALA A 192      42.695  13.440  20.845  1.00 16.46        A
      ATOM   1006  O    ALA A 192      43.851  13.038  20.697  1.00 17.96        A
      ATOM   1007  N    LEU A 193      42.401  14.563  21.496  1.00 15.02        A
      ATOM   1008  CA   LEU A 193      43.459  15.392  22.067  1.00 15.42        A
 35   ATOM   1009  CB   LEU A 193      42.884  16.712  22.600  1.00 12.88        A
      ATOM   1010  CG   LEU A 193      42.445  17.721  21.525  1.00 15.97        A
      ATOM   1011  CD1  LEU A 193      41.869  18.979  22.190  1.00 13.97        A
      ATOM   1012  CD2  LEU A 193      43.642  18.088  20.655  1.00 14.58        A
      ATOM   1013  C    LEU A 193      44.211  14.659  23.174  1.00 14.49        A
 40   ATOM   1014  O    LEU A 193      45.427  14.813  23.310  1.00 16.56        A
      ATOM   1015  N    GLU A 194      43.500  13.870  23.975  1.00 13.96        A
      ATOM   1016  CA   GLU A 194      44.179  13.123  25.032  1.00 14.08        A
      ATOM   1017  CB   GLU A 194      43.190  12.295  25.857  1.00 14.65        A
      ATOM   1018  CG   GLU A 194      43.882  11.301  26.789  1.00 17.09        A
 45   ATOM   1019  CD   GLU A 194      42.924  10.592  27.730  1.00 19.59        A
      ATOM   1020  OE1  GLU A 194      41.809  10.237  27.295  1.00 19.25        A
      ATOM   1021  OE2  GLU A 194      43.302  10.380  28.906  1.00 20.20        A
      ATOM   1022  C    GLU A 194      45.208  12.199  24.386  1.00 13.57        A
      ATOM   1023  O    GLU A 194      46.337  12.093  24.847  1.00 14.23        A
 50   ATOM   1024  N    TYR A 195      44.822  11.544  23.301  1.00 14.89        A
      ATOM   1025  CA   TYR A 195      45.743  10.642  22.618  1.00 16.58        A
      ATOM   1026  CB   TYR A 195      45.030   9.910  21.488  1.00 17.29        A
      ATOM   1027  CG   TYR A 195      45.956   9.058  20.649  1.00 17.92        A
      ATOM   1028  CD1  TYR A 195      46.347   7.788  21.077  1.00 17.96        A
 55   ATOM   1029  CE1  TYR A 195      47.203   6.996  20.304  1.00 19.77        A
      ATOM   1030  CD2  TYR A 195      46.445   9.524  19.428  1.00 16.67        A
      ATOM   1031  CE2  TYR A 195      47.299   8.744  18.651  1.00 18.51        A
      ATOM   1032  CZ   TYR A 195      47.671   7.481  19.094  1.00 20.24        A
      ATOM   1033  OH   TYR A 195      48.506   6.705  18.325  1.00 21.89        A
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     ATOM   1034  C    TYR A 195      46.917  11.419  22.035  1.00 16.98      A
     ATOM   1035  O    TYR A 195      48.081  11.047  22.203  1.00 14.61      A
     ATOM   1036  N    LEU A 196      46.599  12.507  21.347  1.00 16.30      A
     ATOM   1037  CA   LEU A 196      47.619  13.328  20.720  1.00 18.15      A
  5  ATOM   1038  CB   LEU A 196      46.969  14.502  19.982  1.00 18.59      A
     ATOM   1039  CG   LEU A 196      47.834  15.203  18.935  1.00 22.51      A
     ATOM   1040  CD1  LEU A 196      48.222  14.206  17.841  1.00 20.94      A
     ATOM   1041  CD2  LEU A 196      47.060  16.375  18.338  1.00 22.98      A
     ATOM   1042  C    LEU A 196      48.592  13.844  21.763  1.00 17.75      A
 10  ATOM   1043  O    LEU A 196      49.801  13.644  21.649  1.00 18.33      A
     ATOM   1044  N    HIS A 197      48.064  14.495  22.792  1.00 17.12      A
     ATOM   1045  CA   HIS A 197      48.913  15.042  23.842  1.00 18.47      A
     ATOM   1046  CB   HIS A 197      48.069  15.866  24.817  1.00 15.90      A
     ATOM   1047  CG   HIS A 197      47.571  17.152  24.231  1.00 19.15      A
 15  ATOM   1048  CD2  HIS A 197      47.830  17.745  23.038  1.00 18.22      A
     ATOM   1049  ND1  HIS A 197      46.704  17.992  24.897  1.00 17.47      A
     ATOM   1050  CE1  HIS A 197      46.450  19.047  24.139  1.00 19.74      A
     ATOM   1051  NE2  HIS A 197      47.119  18.921  23.007  1.00 15.69      A
     ATOM   1052  C    HIS A 197      49.696  13.958  24.572  1.00 19.40      A
 20  ATOM   1053  O    HIS A 197      50.823  14.192  25.021  1.00 19.42      A
     ATOM   1054  N    GLY A 198      49.106  12.770  24.679  1.00 18.59      A
     ATOM   1055  CA   GLY A 198      49.793  11.675  25.339  1.00 19.60      A
     ATOM   1056  C    GLY A 198      51.075  11.307  24.612  1.00 21.86      A
     ATOM   1057  O    GLY A 198      51.963  10.682  25.186  1.00 23.09      A
 25  ATOM   1058  N    LYS A 199      51.174  11.687  23.341  1.00 22.81      A
     ATOM   1059  CA   LYS A 199      52.368  11.401  22.549  1.00 24.43      A
     ATOM   1060  CB   LYS A 199      51.990  10.905  21.154  1.00 26.00      A
     ATOM   1061  CG   LYS A 199      51.378   9.520  21.133  1.00 30.98      A
     ATOM   1062  CD   LYS A 199      51.291   9.002  19.708  1.00 36.85      A
 30  ATOM   1063  CE   LYS A 199      50.832   7.559  19.682  1.00 40.37      A
     ATOM   1064  NZ   LYS A 199      51.646   6.691  20.581  1.00 43.48      A
     ATOM   1065  C    LYS A 199      53.253  12.631  22.414  1.00 23.88      A
     ATOM   1066  O    LYS A 199      54.144  12.669  21.568  1.00 24.97      A
     ATOM   1067  N    GLY A 200      52.997  13.638  23.243  1.00 24.00      A
 35  ATOM   1068  CA   GLY A 200      53.790  14.853  23.203  1.00 22.12      A
     ATOM   1069  C    GLY A 200      53.665  15.632  21.907  1.00 22.14      A
     ATOM   1070  O    GLY A 200      54.632  16.231  21.439  1.00 22.41      A
     ATOM   1071  N    ILE A 201      52.475  15.630  21.320  1.00 20.00      A
     ATOM   1072  CA   ILE A 201      52.252  16.355  20.080  1.00 18.93      A
 40  ATOM   1073  CB   ILE A 201      51.784  15.414  18.955  1.00 19.70      A
     ATOM   1074  CG2  ILE A 201      51.414  16.226  17.716  1.00 20.12      A
     ATOM   1075  CG1  ILE A 201      52.880  14.395  18.636  1.00 20.03      A
     ATOM   1076  CD1  ILE A 201      52.408  13.258  17.745  1.00 22.75      A
     ATOM   1077  C    ILE A 201      51.193  17.425  20.270  1.00 19.87      A
 45  ATOM   1078  O    ILE A 201      50.121  17.161  20.817  1.00 20.08      A
     ATOM   1079  N    ILE A 202      51.508  18.633  19.815  1.00 19.94      A
     ATOM   1080  CA   ILE A 202      50.601  19.772  19.891  1.00 20.45      A
     ATOM   1081  CB   ILE A 202      51.352  21.040  20.356  1.00 22.21      A
     ATOM   1082  CG2  ILE A 202      50.381  22.220  20.470  1.00 22.67      A
 50  ATOM   1083  CG1  ILE A 202      52.033  20.775  21.700  1.00 24.19      A
     ATOM   1084  CD1  ILE A 202      52.914  21.920  22.169  1.00 25.39      A
     ATOM   1085  C    ILE A 202      50.105  19.999  18.464  1.00 20.71      A
     ATOM   1086  O    ILE A 202      50.910  20.067  17.538  1.00 19.48      A
     ATOM   1087  N    HIS A 203      48.795  20.108  18.270  1.00 18.65      A
 55  ATOM   1088  CA   HIS A 203      48.280  20.319  16.919  1.00 18.02      A
     ATOM   1089  CB   HIS A 203      46.775  20.057  16.874  1.00 16.31      A
     ATOM   1090  CG   HIS A 203      46.199  20.136  15.495  1.00 18.36      A
     ATOM   1091  CD2  HIS A 203      46.043  21.186  14.655  1.00 16.42      A
     ATOM   1092  ND1  HIS A 203      45.759  19.026  14.806  1.00 19.50      A
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      ATOM   1093  CE1 HIS A 203      45.359  19.389  13.600  1.00 17.64           A
      ATOM   1094  NE2 HIS A 203      45.522  20.694  13.483  1.00 20.87           A
      ATOM   1095  C   HIS A 203      48.589  21.738  16.405  1.00 18.92           A
      ATOM   1096  O   HIS A 203      49.073  21.906  15.282  1.00 16.21           A
 5    ATOM   1097  N   ARG A 204      48.301  22.744  17.232  1.00 18.60           A
      ATOM   1098  CA  ARG A 204      48.552  24.157  16.914  1.00 19.81           A
      ATOM   1099  CB  ARG A 204      49.998  24.365  16.458  1.00 21.61           A
      ATOM   1100  CG  ARG A 204      51.024  24.137  17.550  1.00 23.82           A
      ATOM   1101  CD  ARG A 204      52.323  24.870  17.252  1.00 27.62           A
 10   ATOM   1102  NE  ARG A 204      52.932  24.449  15.994  1.00 29.43           A
      ATOM   1103  CZ  ARG A 204      54.125  24.861  15.572  1.00 33.10           A
      ATOM   1104  NH1 ARG A 204      54.835  25.706  16.311  1.00 32.12           A
      ATOM   1105  NH2 ARG A 204      54.614  24.426  14.418  1.00 30.25           A
      ATOM   1106  C   ARG A 204      47.624  24.830  15.905  1.00 20.03           A
 15   ATOM   1107  O   ARG A 204      47.711  26.038  15.698  1.00 20.88           A
      ATOM   1108  N   ASP A 205      46.755  24.071  15.255  1.00 18.96           A
      ATOM   1109  CA  ASP A 205      45.828  24.692  14.325  1.00 17.90           A
      ATOM   1110  CB  ASP A 205      46.418  24.741  12.914  1.00 18.95           A
      ATOM   1111  CG  ASP A 205      45.655  25.688  12.008  1.00 20.36           A
 20   ATOM   1112  OD1 ASP A 205      44.939  26.560  12.545  1.00 20.35           A
      ATOM   1113  OD2 ASP A 205      45.772  25.573  10.771  1.00 22.49           A
      ATOM   1114  C   ASP A 205      44.500  23.956  14.328  1.00 19.60           A
      ATOM   1115  O   ASP A 205      43.876  23.751  13.287  1.00 21.53           A
      ATOM   1116  N   LEU A 206      44.063  23.569  15.521  1.00 18.53           A
 25   ATOM   1117  CA  LEU A 206      42.813  22.851  15.667  1.00 19.18           A
      ATOM   1118  CB  LEU A 206      42.693  22.295  17.087  1.00 18.94           A
      ATOM   1119  CG  LEU A 206      41.511  21.358  17.346  1.00 23.10           A
      ATOM   1120  CD1 LEU A 206      41.615  20.142  16.436  1.00 23.01           A
      ATOM   1121  CD2 LEU A 206      41.504  20.933  18.808  1.00 22.97           A
 30   ATOM   1122  C   LEU A 206      41.639  23.772  15.361  1.00 19.05           A
      ATOM   1123  O   LEU A 206      41.556  24.880  15.886  1.00 19.25           A
      ATOM   1124  N   LYS A 207      40.740  23.307  14.500  1.00 17.54           A
      ATOM   1125  CA  LYS A 207      39.564  24.081  14.110  1.00 18.60           A
      ATOM   1126  CB  LYS A 207      39.980  25.248  13.196  1.00 18.98           A
 35   ATOM   1127  CG  LYS A 207      40.786  24.817  11.982  1.00 18.20           A
      ATOM   1128  CD  LYS A 207      41.246  26.000  11.139  1.00 21.42           A
      ATOM   1129  CE  LYS A 207      42.223  25.537  10.062  1.00 23.21           A
      ATOM   1130  NZ  LYS A 207      42.561  26.604   9.084  1.00 29.61           A
      ATOM   1131  C   LYS A 207      38.566  23.181  13.388  1.00 18.18           A
 40   ATOM   1132  O   LYS A 207      38.921  22.100  12.915  1.00 18.11           A
      ATOM   1133  N   PRO A 208      37.298  23.614  13.293  1.00 20.26           A
      ATOM   1134  CD  PRO A 208      36.713  24.833  13.882  1.00 18.79           A
      ATOM   1135  CA  PRO A 208      36.272  22.814  12.616  1.00 19.67           A
      ATOM   1136  CB  PRO A 208      35.063  23.742  12.608  1.00 19.45           A
 45   ATOM   1137  CG  PRO A 208      35.231  24.509  13.891  1.00 21.81           A
      ATOM   1138  C   PRO A 208      36.674  22.372  11.209  1.00 21.04           A
      ATOM   1139  O   PRO A 208      36.264  21.307  10.751  1.00 21.19           A
      ATOM   1140  N   GLU A 209      37.474  23.188  10.528  1.00 21.69           A
      ATOM   1141  CA  GLU A 209      37.928  22.872   9.170  1.00 22.64           A
 50   ATOM   1142  CB  GLU A 209      38.644  24.084   8.558  1.00 23.65           A
      ATOM   1143  CG  GLU A 209      39.253  23.825   7.185  1.00 27.24           A
      ATOM   1144  CD  GLU A 209      40.155  24.958   6.716  1.00 29.40           A
      ATOM   1145  OE1 GLU A 209      39.660  26.094   6.553  1.00 29.68           A
      ATOM   1146  OE2 GLU A 209      41.363  24.711   6.511  1.00 30.07           A
 55   ATOM   1147  C   GLU A 209      38.879  21.668   9.159  1.00 22.28           A
      ATOM   1148  O   GLU A 209      38.955  20.933   8.170  1.00 21.36           A
      ATOM   1149  N   ASN A 210      39.600  21.490  10.263  1.00 19.90           A
      ATOM   1150  CA  ASN A 210      40.574  20.412  10.436  1.00 19.44           A
      ATOM   1151  CB  ASN A 210      41.744  20.912  11.287  1.00 20.07           A
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      ATOM   1152   CG   ASN A 210      42.746  21.698  10.479  1.00 25.77        A
      ATOM   1153   OD1  ASN A 210      43.571  22.427  11.029  1.00 26.73        A
      ATOM   1154   ND2  ASN A 210      42.687  21.548   9.158  1.00 25.15        A
      ATOM   1155   C    ASN A 210      40.005  19.151  11.078  1.00 18.63        A
   5  ATOM   1156   O    ASN A 210      40.712  18.154  11.234  1.00 18.29        A
      ATOM   1157   N    ILE A 211      38.739  19.202  11.469  1.00 16.31        A
      ATOM   1158   CA   ILE A 211      38.090  18.058  12.085  1.00 15.49        A
      ATOM   1159   CB   ILE A 211      37.336  18.488  13.354  1.00 15.40        A
      ATOM   1160   CG2  ILE A 211      36.582  17.311  13.950  1.00 14.59        A
  10  ATOM   1161   CG1  ILE A 211      38.342  19.046  14.365  1.00 15.91        A
      ATOM   1162   CD1  ILE A 211      37.720  19.669  15.590  1.00 15.98        A
      ATOM   1163   C    ILE A 211      37.131  17.485  11.059  1.00 17.26        A
      ATOM   1164   O    ILE A 211      35.995  17.947  10.926  1.00 18.16        A
      ATOM   1165   N    LEU A 212      37.599  16.486  10.317  1.00 15.97        A
  15  ATOM   1166   CA   LEU A 212      36.784  15.875   9.274  1.00 17.08        A
      ATOM   1167   CB   LEU A 212      37.685  15.249   8.202  1.00 17.78        A
      ATOM   1168   CG   LEU A 212      38.785  16.157   7.640  1.00 18.92        A
      ATOM   1169   CD1  LEU A 212      39.476  15.450   6.485  1.00 22.09        A
      ATOM   1170   CD2  LEU A 212      38.188  17.482   7.166  1.00 19.91        A
  20  ATOM   1171   C    LEU A 212      35.843  14.825   9.837  1.00 18.35        A
      ATOM   1172   O    LEU A 212      35.957  14.433  11.002  1.00 19.39        A
      ATOM   1173   N    LEU A 213      34.915  14.368   9.000  1.00 17.84        A
      ATOM   1174   CA   LEU A 213      33.942  13.362   9.403  1.00 19.94        A
      ATOM   1175   CB   LEU A 213      32.556  14.004   9.487  1.00 20.84        A
  25  ATOM   1176   CG   LEU A 213      32.396  15.059  10.583  1.00 20.31        A
      ATOM   1177   CD1  LEU A 213      31.124  15.837  10.367  1.00 22.75        A
      ATOM   1178   CD2  LEU A 213      32.379  14.378  11.940  1.00 23.93        A
      ATOM   1179   C    LEU A 213      33.914  12.187   8.426  1.00 20.98        A
      ATOM   1180   O    LEU A 213      33.743  12.379   7.218  1.00 19.55        A
  30  ATOM   1181   N    ASN A 214      34.088  10.970   8.935  1.00 20.44        A
      ATOM   1182   CA   ASN A 214      34.055   9.814   8.049  1.00 23.77        A
      ATOM   1183   CB   ASN A 214      34.745   8.596   8.674  1.00 25.30        A
      ATOM   1184   CG   ASN A 214      34.077   8.127   9.948  1.00 32.04        A
      ATOM   1185   OD1  ASN A 214      32.908   8.422  10.206  1.00 34.43        A
  35  ATOM   1186   ND2  ASN A 214      34.818   7.369  10.752  1.00 33.85        A
      ATOM   1187   C    ASN A 214      32.618   9.466   7.693  1.00 24.07        A
      ATOM   1188   O    ASN A 214      31.672  10.113   8.150  1.00 19.94        A
      ATOM   1189   N    GLU A 215      32.459   8.433   6.879  1.00 25.77        A
      ATOM   1190   CA   GLU A 215      31.138   8.003   6.445  1.00 28.69        A
  40  ATOM   1191   CB   GLU A 215      31.275   6.796   5.513  1.00 31.98        A
      ATOM   1192   CG   GLU A 215      29.970   6.334   4.896  1.00 40.22        A
      ATOM   1193   CD   GLU A 215      30.182   5.312   3.795  1.00 44.27        A
      ATOM   1194   OE1  GLU A 215      30.817   4.268   4.065  1.00 46.46        A
      ATOM   1195   OE2  GLU A 215      29.716   5.556   2.660  1.00 46.13        A
  45  ATOM   1196   C    GLU A 215      30.188   7.673   7.601  1.00 28.41        A
      ATOM   1197   O    GLU A 215      28.971   7.769   7.447  1.00 28.52        A
      ATOM   1198   N    ASP A 216      30.737   7.287   8.752  1.00 26.77        A
      ATOM   1199   CA   ASP A 216      29.914   6.953   9.917  1.00 27.28        A
      ATOM   1200   CB   ASP A 216      30.538   5.795  10.686  1.00 31.27        A
  50  ATOM   1201   CG   ASP A 216      30.390   4.466   9.979  1.00 37.61        A
      ATOM   1202   OD1  ASP A 216      29.274   4.170   9.499  1.00 39.45        A
      ATOM   1203   OD2  ASP A 216      31.382   3.710   9.902  1.00 41.84        A
      ATOM   1204   C    ASP A 216      29.697   8.135  10.862  1.00 26.37        A
      ATOM   1205   O    ASP A 216      29.136   7.984  11.950  1.00 25.73        A
  55  ATOM   1206   N    MET A 217      30.156   9.306  10.441  1.00 23.02        A
      ATOM   1207   CA   MET A 217      30.015  10.527  11.218  1.00 21.83        A
      ATOM   1208   CB   MET A 217      28.537  10.789  11.517  1.00 23.24        A
      ATOM   1209   CG   MET A 217      27.742  11.186  10.274  1.00 22.98        A
      ATOM   1210   SD   MET A 217      28.464  12.616   9.430  1.00 27.57        A
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     ATOM   1211  CE  MET A 217      27.679  13.974  10.332  1.00 26.68      A
     ATOM   1212  C   MET A 217      30.844  10.618  12.502  1.00 21.51      A
     ATOM   1213  O   MET A 217      30.474  11.323  13.440  1.00 18.62      A
     ATOM   1214  N   HIS A 218      31.957   9.892  12.544  1.00 20.10      A
  5  ATOM   1215  CA  HIS A 218      32.873   9.964  13.678  1.00 19.86      A
     ATOM   1216  CB  HIS A 218      33.482   8.594  13.977  1.00 20.21      A
     ATOM   1217  CG  HIS A 218      32.551   7.667  14.698  1.00 22.40      A
     ATOM   1218  CD2 HIS A 218      31.910   6.547  14.287  1.00 21.27      A
     ATOM   1219  ND1 HIS A 218      32.177   7.863  16.011  1.00 19.59      A
 10  ATOM   1220  CE1 HIS A 218      31.348   6.902  16.379  1.00 21.88      A
     ATOM   1221  NE2 HIS A 218      31.168   6.091  15.351  1.00 22.08      A
     ATOM   1222  C   HIS A 218      33.947  10.921  13.172  1.00 19.10      A
     ATOM   1223  O   HIS A 218      34.170  11.004  11.965  1.00 20.31      A
     ATOM   1224  N   ILE A 219      34.617  11.638  14.067  1.00 17.21      A
 15  ATOM   1225  CA  ILE A 219      35.628  12.586  13.618  1.00 15.26      A
     ATOM   1226  CB  ILE A 219      35.987  13.614  14.716  1.00 15.38      A
     ATOM   1227  CG2 ILE A 219      34.722  14.305  15.221  1.00 14.58      A
     ATOM   1228  CG1 ILE A 219      36.734  12.919  15.864  1.00 14.46      A
     ATOM   1229  CD1 ILE A 219      37.279  13.885  16.911  1.00 13.74      A
 20  ATOM   1230  C   ILE A 219      36.929  11.944  13.161  1.00 16.21      A
     ATOM   1231  O   ILE A 219      37.238  10.799  13.500  1.00 15.88      A
     ATOM   1232  N   GLN A 220      37.677  12.711  12.378  1.00 15.62      A
     ATOM   1233  CA  GLN A 220      38.980  12.316  11.876  1.00 17.84      A
     ATOM   1234  CB  GLN A 220      38.872  11.595  10.525  1.00 20.00      A
 25  ATOM   1235  CG  GLN A 220      38.463  10.129  10.659  1.00 26.97      A
     ATOM   1236  CD  GLN A 220      38.648   9.343   9.372  1.00 29.95      A
     ATOM   1237  OE1 GLN A 220      37.968   9.590   8.373  1.00 33.12      A
     ATOM   1238  NE2 GLN A 220      39.578   8.393   9.389  1.00 30.47      A
     ATOM   1239  C   GLN A 220      39.757  13.610  11.735  1.00 17.00      A
 30  ATOM   1240  O   GLN A 220      39.609  14.339  10.751  1.00 18.27      A
     ATOM   1241  N   ILE A 221      40.566  13.906  12.746  1.00 14.34      A
     ATOM   1242  CA  ILE A 221      41.361  15.120  12.753  1.00 14.46      A
     ATOM   1243  CB  ILE A 221      41.867  15.416  14.175  1.00 12.30      A
     ATOM   1244  CG2 ILE A 221      42.764  16.656  14.167  1.00 14.78      A
 35  ATOM   1245  CG1 ILE A 221      40.660  15.613  15.102  1.00 13.92      A
     ATOM   1246  CD1 ILE A 221      41.003  15.901  16.543  1.00 15.06      A
     ATOM   1247  C   ILE A 221      42.536  14.996  11.783  1.00 15.44      A
     ATOM   1248  O   ILE A 221      43.106  13.915  11.613  1.00 13.93      A
     ATOM   1249  N   THR A 222      42.877  16.101  11.127  1.00 15.36      A
 40  ATOM   1250  CA  THR A 222      43.980  16.098  10.174  1.00 17.52      A
     ATOM   1251  CB  THR A 222      43.470  15.836   8.750  1.00 19.92      A
     ATOM   1252  OG1 THR A 222      44.587  15.637   7.875  1.00 18.78      A
     ATOM   1253  CG2 THR A 222      42.630  17.018   8.257  1.00 18.16      A
     ATOM   1254  C   THR A 222      44.735  17.428  10.192  1.00 19.60      A
 45  ATOM   1255  O   THR A 222      44.509  18.257  11.084  1.00 18.59      A
     ATOM   1256  N   ASP A 223      45.630  17.610   9.216  1.00 18.69      A
     ATOM   1257  CA  ASP A 223      46.440  18.825   9.069  1.00 20.12      A
     ATOM   1258  CB  ASP A 223      45.532  20.065   9.108  1.00 23.51      A
     ATOM   1259  CG  ASP A 223      46.248  21.335   8.670  1.00 27.09      A
 50  ATOM   1260  OD1 ASP A 223      47.283  21.227   7.975  1.00 26.28      A
     ATOM   1261  OD2 ASP A 223      45.765  22.438   9.009  1.00 26.15      A
     ATOM   1262  C   ASP A 223      47.516  18.913  10.150  1.00 21.73      A
     ATOM   1263  O   ASP A 223      47.439  19.751  11.055  1.00 22.09      A
     ATOM   1264  N   PHE A 224      48.535  18.063  10.027  1.00 20.75      A
 55  ATOM   1265  CA  PHE A 224      49.611  17.988  11.009  1.00 20.11      A
     ATOM   1266  CB  PHE A 224      49.805  16.527  11.424  1.00 20.62      A
     ATOM   1267  CG  PHE A 224      48.682  15.991  12.263  1.00 21.41      A
     ATOM   1268  CD1 PHE A 224      48.598  16.312  13.614  1.00 23.05      A
     ATOM   1269  CD2 PHE A 224      47.681  15.212  11.693  1.00 22.27      A
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      ATOM   1270   CE1 PHE A 224      47.528  15.868  14.389  1.00 23.30      A
      ATOM   1271   CE2 PHE A 224      46.606  14.763  12.457  1.00 21.11      A
      ATOM   1272   CZ  PHE A 224      46.530  15.093  13.807  1.00 22.02      A
      ATOM   1273   C   PHE A 224      50.957  18.583  10.619  1.00 20.45      A
   5  ATOM   1274   O   PHE A 224      51.905  18.547  11.407  1.00 20.73      A
      ATOM   1275   N   GLY A 225      51.049  19.125   9.412  1.00 22.02      A
      ATOM   1276   CA  GLY A 225      52.301  19.713   8.981  1.00 22.66      A
      ATOM   1277   C   GLY A 225      52.742  20.822   9.920  1.00 24.99      A
      ATOM   1278   O   GLY A 225      53.939  21.041  10.122  1.00 24.52      A
  10  ATOM   1279   N   THR A 226      51.779  21.524  10.508  1.00 23.50      A
      ATOM   1280   CA  THR A 226      52.106  22.613  11.416  1.00 25.16      A
      ATOM   1281   CB  THR A 226      51.199  23.829  11.160  1.00 24.76      A
      ATOM   1282   OG1 THR A 226      49.831  23.410  11.113  1.00 22.68      A
      ATOM   1283   CG2 THR A 226      51.571  24.490   9.834  1.00 25.00      A
  15  ATOM   1284   C   THR A 226      52.046  22.233  12.894  1.00 25.79      A
      ATOM   1285   O   THR A 226      52.019  23.100  13.768  1.00 24.54      A
      ATOM   1286   N   ALA A 227      52.037  20.935  13.173  1.00 24.97      A
      ATOM   1287   CA  ALA A 227      52.004  20.475  14.550  1.00 25.49      A
      ATOM   1288   CB  ALA A 227      51.659  18.993  14.607  1.00 22.85      A
  20  ATOM   1289   C   ALA A 227      53.384  20.715  15.149  1.00 27.70      A
      ATOM   1290   O   ALA A 227      54.331  21.047  14.435  1.00 26.60      A
      ATOM   1291   N   LYS A 228      53.491  20.558  16.461  1.00 28.53      A
      ATOM   1292   CA  LYS A 228      54.760  20.745  17.149  1.00 32.12      A
      ATOM   1293   CB  LYS A 228      54.699  21.974  18.054  1.00 33.81      A
  25  ATOM   1294   CG  LYS A 228      56.007  22.294  18.765  1.00 41.23      A
      ATOM   1295   CD  LYS A 228      57.082  22.725  17.768  1.00 47.57      A
      ATOM   1296   CE  LYS A 228      58.401  23.056  18.462  1.00 49.82      A
      ATOM   1297   NZ  LYS A 228      59.435  23.425  17.480  1.00 51.49      A
      ATOM   1298   C   LYS A 228      55.019  19.504  17.985  1.00 33.25      A
  30  ATOM   1299   O   LYS A 228      54.190  19.129  18.815  1.00 33.70      A
      ATOM   1300   N   VAL A 229      56.159  18.860  17.756  1.00 33.64      A
      ATOM   1301   CA  VAL A 229      56.516  17.661  18.501  1.00 34.66      A
      ATOM   1302   CB  VAL A 229      57.248  16.646  17.609  1.00 33.50      A
      ATOM   1303   CG1 VAL A 229      57.619  15.419  18.415  1.00 32.34      A
  35  ATOM   1304   CG2 VAL A 229      56.370  16.264  16.436  1.00 34.25      A
      ATOM   1305   C   VAL A 229      57.420  18.035  19.668  1.00 37.57      A
      ATOM   1306   O   VAL A 229      58.581  18.392  19.474  1.00 35.91      A
      ATOM   1307   N   LEU A 230      56.877  17.948  20.878  1.00 40.57      A
      ATOM   1308   CA  LEU A 230      57.615  18.289  22.088  1.00 46.10      A
  40  ATOM   1309   CB  LEU A 230      56.654  18.417  23.270  1.00 44.71      A
      ATOM   1310   CG  LEU A 230      55.627  19.545  23.207  1.00 44.50      A
      ATOM   1311   CD1 LEU A 230      54.673  19.430  24.383  1.00 44.39      A
      ATOM   1312   CD2 LEU A 230      56.340  20.885  23.214  1.00 44.81      A
      ATOM   1313   C   LEU A 230      58.695  17.279  22.440  1.00 50.42      A
  45  ATOM   1314   O   LEU A 230      58.603  16.104  22.089  1.00 51.64      A
      ATOM   1315   N   SER A 231      59.717  17.756  23.145  1.00 55.81      A
      ATOM   1316   CA  SER A 231      60.824  16.914  23.583  1.00 61.14      A
      ATOM   1317   CB  SER A 231      62.077  17.200  22.750  1.00 61.27      A
      ATOM   1318   OG  SER A 231      62.444  18.568  22.823  1.00 62.85      A
  50  ATOM   1319   C   SER A 231      61.124  17.126  25.071  1.00 64.65      A
      ATOM   1320   O   SER A 231      61.392  16.164  25.794  1.00 65.70      A
      ATOM   1321   N   PRO A 232      61.081  18.387  25.549  1.00 67.54      A
      ATOM   1322   CD  PRO A 232      60.854  19.651  24.823  1.00 68.60      A
      ATOM   1323   CA  PRO A 232      61.358  18.655  26.966  1.00 68.74      A
  55  ATOM   1324   CB  PRO A 232      61.109  20.158  27.086  1.00 68.83      A
      ATOM   1325   CG  PRO A 232      61.505  20.666  25.737  1.00 68.96      A
      ATOM   1326   C   PRO A 232      60.640  17.846  27.899  1.00 69.17      A
      ATOM   1327   O   PRO A 232      59.335  17.494  27.541  1.00 69.94      A
      ATOM   1328   N   ALA A 237      57.424  23.198  27.637  1.00 80.06      A
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      ATOM   1329  CA   ALA A 237     56.783  23.047  26.335  1.00 79.29      A
      ATOM   1330  CB   ALA A 237     55.275  22.907  26.512  1.00 78.64      A
      ATOM   1331  C    ALA A 237     57.092  24.239  25.433  1.00 79.07      A
      ATOM   1332  O    ALA A 237     56.250  25.113  25.249  1.00 79.47      A
   5  ATOM   1333  N    ALA A 238     58.297  24.280  24.871  1.00 78.57      A
      ATOM   1334  CA   ALA A 238     58.683  25.383  23.992  1.00 78.50      A
      ATOM   1335  CB   ALA A 238     60.186  25.347  23.728  1.00 78.50      A
      ATOM   1336  C    ALA A 238     57.920  25.327  22.673  1.00 78.15      A
      ATOM   1337  O    ALA A 238     57.243  24.341  22.375  1.00 77.96      A
  10  ATOM   1338  N    ALA A 239     58.027  26.393  21.887  1.00 77.28      A
      ATOM   1339  CA   ALA A 239     57.338  26.452  20.603  1.00 76.27      A
      ATOM   1340  CB   ALA A 239     55.849  26.489  20.827  1.00 76.61      A
      ATOM   1341  C    ALA A 239     57.766  27.667  19.793  1.00 75.38      A
      ATOM   1342  O    ALA A 239     58.955  27.955  19.700  1.00 75.89      A
  15  ATOM   1343  N    ASN A 240     56.781  28.357  19.214  1.00 73.95      A
      ATOM   1344  CA   ASN A 240     56.967  29.553  18.389  1.00 71.07      A
      ATOM   1345  CB   ASN A 240     58.151  30.400  18.874  1.00 71.47      A
      ATOM   1346  CG   ASN A 240     59.459  30.055  18.174  1.00 72.06      A
      ATOM   1347  OD1  ASN A 240     59.575  30.149  16.943  1.00 72.03      A
  20  ATOM   1348  ND2  ASN A 240     60.470  29.665  18.964  1.00 71.91      A
      ATOM   1349  C    ASN A 240     57.188  29.178  16.928  1.00 69.41      A
      ATOM   1350  O    ASN A 240     57.480  28.024  16.624  1.00 70.09      A
      ATOM   1351  N    ALA A 241     57.055  30.165  16.038  1.00 66.62      A
      ATOM   1352  CA   ALA A 241     57.246  30.013  14.585  1.00 63.94      A
  25  ATOM   1353  C    ALA A 241     55.952  30.080  13.772  1.00 60.63      A
      ATOM   1354  O    ALA A 241     55.840  30.880  12.845  1.00 61.29      A
      ATOM   1355  CB   ALA A 241     57.979  28.704  14.246  1.00 65.23      A
      ATOM   1356  N    PHE A 242     54.984  29.236  14.113  1.00 56.72      A
      ATOM   1357  CA   PHE A 242     53.712  29.196  13.394  1.00 52.53      A
  30  ATOM   1358  CB   PHE A 242     53.419  27.767  12.923  1.00 49.14      A
      ATOM   1359  CG   PHE A 242     52.040  27.590  12.354  1.00 47.38      A
      ATOM   1360  CD1  PHE A 242     51.731  28.067  11.085  1.00 47.69      A
      ATOM   1361  CD2  PHE A 242     51.038  26.975  13.102  1.00 45.45      A
      ATOM   1362  CE1  PHE A 242     50.445  27.937  10.565  1.00 46.75      A
  35  ATOM   1363  CE2  PHE A 242     49.751  26.840  12.594  1.00 45.41      A
      ATOM   1364  CZ   PHE A 242     49.453  27.323  11.322  1.00 46.55      A
      ATOM   1365  C    PHE A 242     52.534  29.688  14.229  1.00 50.08      A
      ATOM   1366  O    PHE A 242     52.502  29.505  15.444  1.00 49.86      A
      ATOM   1367  N    VAL A 243     51.566  30.305  13.557  1.00 47.67      A
  40  ATOM   1368  CA   VAL A 243     50.355  30.809  14.200  1.00 46.21      A
      ATOM   1369  CB   VAL A 243     50.340  32.352  14.258  1.00 47.36      A
      ATOM   1370  CG1  VAL A 243     49.012  32.844  14.825  1.00 47.54      A
      ATOM   1371  CG2  VAL A 243     51.497  32.842  15.109  1.00 48.50      A
      ATOM   1372  C    VAL A 243     49.150  30.342  13.389  1.00 44.12      A
  45  ATOM   1373  O    VAL A 243     48.956  30.765  12.247  1.00 44.46      A
      ATOM   1374  N    GLY A 244     48.348  29.467  13.985  1.00 40.48      A
      ATOM   1375  CA   GLY A 244     47.176  28.941  13.306  1.00 37.65      A
      ATOM   1376  C    GLY A 244     46.101  29.960  12.964  1.00 35.39      A
      ATOM   1377  O    GLY A 244     46.313  31.168  13.065  1.00 35.92      A
  50  ATOM   1378  N    THR A 245     44.936  29.463  12.560  1.00 33.30      A
      ATOM   1379  CA   THR A 245     43.813  30.312  12.184  1.00 30.20      A
      ATOM   1380  CB   THR A 245     42.593  29.450  11.829  1.00 32.00      A
      ATOM   1381  OG1  THR A 245     42.952  28.573  10.755  1.00 32.81      A
      ATOM   1382  CG2  THR A 245     41.419  30.319  11.390  1.00 28.34      A
  55  ATOM   1383  C    THR A 245     43.476  31.296  13.296  1.00 27.96      A
      ATOM   1384  O    THR A 245     43.212  30.907  14.434  1.00 25.46      A
      ATOM   1385  N    ALA A 246     43.486  32.576  12.938  1.00 25.22      A
      ATOM   1386  CA   ALA A 246     43.247  33.675  13.867  1.00 23.27      A
      ATOM   1387  CB   ALA A 246     42.956  34.955  13.082  1.00 22.94      A
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      ATOM   1388  C    ALA A 246     42.178 33.475 14.934  1.00 21.27      A
      ATOM   1389  O    ALA A 246     42.431 33.705 16.114  1.00 20.93      A
      ATOM   1390  N    GLN A 247     40.988 33.047 14.536  1.00 19.67      A
      ATOM   1391  CA   GLN A 247     39.911 32.886 15.504  1.00 20.17      A
    5 ATOM   1392  CB   GLN A 247     38.608 32.535 14.779  1.00 21.89      A
      ATOM   1393  CG   GLN A 247     38.522 33.076 13.355  1.00 26.18      A
      ATOM   1394  CD   GLN A 247     37.220 33.794 13.064  1.00 27.30      A
      ATOM   1395  OE1  GLN A 247     36.172 33.447 13.605  1.00 30.13      A
      ATOM   1396  NE2  GLN A 247     37.278 34.792 12.189  1.00 28.70      A
   10 ATOM   1397  C    GLN A 247     40.181 31.849 16.595  1.00 19.43      A
      ATOM   1398  O    GLN A 247     39.546 31.883 17.648  1.00 18.93      A
      ATOM   1399  N    TYR A 248     41.132 30.948 16.359  1.00 18.60      A
      ATOM   1400  CA   TYR A 248     41.441 29.896 17.329  1.00 19.20      A
      ATOM   1401  CB   TYR A 248     41.333 28.529 16.642  1.00 17.53      A
   15 ATOM   1402  CG   TYR A 248     40.013 28.362 15.927  1.00 19.32      A
      ATOM   1403  CD1  TYR A 248     38.859 28.010 16.625  1.00 17.69      A
      ATOM   1404  CE1  TYR A 248     37.617 27.976 15.990  1.00 18.18      A
      ATOM   1405  CD2  TYR A 248     39.897 28.664 14.569  1.00 16.87      A
      ATOM   1406  CE2  TYR A 248     38.665 28.635 13.924  1.00 19.17      A
   20 ATOM   1407  CZ   TYR A 248     37.527 28.295 14.643  1.00 19.46      A
      ATOM   1408  OH   TYR A 248     36.299 28.311 14.023  1.00 18.98      A
      ATOM   1409  C    TYR A 248     42.810 30.039 17.993  1.00 20.42      A
      ATOM   1410  O    TYR A 248     43.208 29.191 18.792  1.00 19.19      A
      ATOM   1411  N    VAL A 249     43.523 31.114 17.673  1.00 20.20      A
   25 ATOM   1412  CA   VAL A 249     44.841 31.343 18.251  1.00 20.91      A
      ATOM   1413  CB   VAL A 249     45.542 32.532 17.570  1.00 21.18      A
      ATOM   1414  CG1  VAL A 249     46.821 32.896 18.317  1.00 22.45      A
      ATOM   1415  CG2  VAL A 249     45.862 32.170 16.139  1.00 24.01      A
      ATOM   1416  C    VAL A 249     44.764 31.606 19.750  1.00 21.52      A
   30 ATOM   1417  O    VAL A 249     43.915 32.368 20.216  1.00 22.72      A
      ATOM   1418  N    SER A 250     45.654 30.965 20.503  1.00 20.70      A
      ATOM   1419  CA   SER A 250     45.697 31.133 21.951  1.00 21.65      A
      ATOM   1420  CB   SER A 250     46.370 29.919 22.613  1.00 22.02      A
      ATOM   1421  OG   SER A 250     47.692 29.725 22.132  1.00 22.12      A
   35 ATOM   1422  C    SER A 250     46.476 32.402 22.280  1.00 22.13      A
      ATOM   1423  O    SER A 250     47.332 32.828 21.511  1.00 22.77      A
      ATOM   1424  N    PRO A 251     46.180 33.029 23.425  1.00 22.23      A
      ATOM   1425  CD   PRO A 251     45.163 32.684 24.433  1.00 22.97      A
      ATOM   1426  CA   PRO A 251     46.893 34.254 23.800  1.00 22.52      A
   40 ATOM   1427  CB   PRO A 251     46.233 34.650 25.127  1.00 23.06      A
      ATOM   1428  CG   PRO A 251     45.726 33.329 25.676  1.00 22.55      A
      ATOM   1429  C    PRO A 251     48.414 34.115 23.907  1.00 22.15      A
      ATOM   1430  O    PRO A 251     49.143 35.047 23.563  1.00 22.62      A
      ATOM   1431  N    GLU A 252     48.901 32.966 24.367  1.00 20.69      A
   45 ATOM   1432  CA   GLU A 252     50.347 32.772 24.500  1.00 21.40      A
      ATOM   1433  CB   GLU A 252     50.673 31.382 25.071  1.00 20.59      A
      ATOM   1434  CG   GLU A 252     49.993 30.232 24.352  1.00 21.91      A
      ATOM   1435  CD   GLU A 252     48.691 29.822 25.014  1.00 21.51      A
      ATOM   1436  OE1  GLU A 252     47.989 30.707 25.550  1.00 21.46      A
   50 ATOM   1437  OE2  GLU A 252     48.367 28.613 24.993  1.00 20.23      A
      ATOM   1438  C    GLU A 252     51.071 32.970 23.167  1.00 22.99      A
      ATOM   1439  O    GLU A 252     52.191 33.480 23.136  1.00 23.17      A
      ATOM   1440  N    LEU A 253     50.441 32.576 22.064  1.00 23.00      A
      ATOM   1441  CA   LEU A 253     51.068 32.753 20.758  1.00 25.62      A
   55 ATOM   1442  CB   LEU A 253     50.277 32.029 19.669  1.00 26.75      A
      ATOM   1443  CG   LEU A 253     50.743 30.620 19.296  1.00 31.87      A
      ATOM   1444  CD1  LEU A 253     50.433 29.651 20.422  1.00 31.81      A
      ATOM   1445  CD2  LEU A 253     50.044 30.179 18.015  1.00 31.86      A
      ATOM   1446  C    LEU A 253     51.201 34.228 20.371  1.00 26.94      A
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	ATOM	1447	O	LEU A 253	52.107	34.601	19.626	1.00 27.09	A
	ATOM	1448	N	LEU A 254	50.297	35.059	20.877	1.00 25.83	A
	ATOM	1449	CA	LEU A 254	50.297	36.485	20.564	1.00 27.26	A
	ATOM	1450	CB	LEU A 254	48.858	37.006	20.564	1.00 25.84	A
5	ATOM	1451	CG	LEU A 254	47.882	36.290	19.621	1.00 24.69	A
	ATOM	1452	CD1	LEU A 254	46.459	36.724	19.932	1.00 23.64	A
	ATOM	1453	CD2	LEU A 254	48.236	36.597	18.177	1.00 24.24	A
	ATOM	1454	C	LEU A 254	51.134	37.314	21.537	1.00 30.62	A
	ATOM	1455	O	LEU A 254	51.633	38.383	21.187	1.00 32.35	A
10	ATOM	1456	N	THR A 255	51.292	36.821	22.758	1.00 32.47	A
	ATOM	1457	CA	THR A 255	52.056	37.547	23.759	1.00 36.70	A
	ATOM	1458	CB	THR A 255	51.368	37.478	25.127	1.00 34.51	A
	ATOM	1459	OG1	THR A 255	51.188	36.106	25.494	1.00 35.49	A
	ATOM	1460	CG2	THR A 255	50.013	38.166	25.077	1.00 33.40	A
15	ATOM	1461	C	THR A 255	53.477	37.035	23.910	1.00 40.09	A
	ATOM	1462	O	THR A 255	54.430	37.793	23.772	1.00 43.69	A
	ATOM	1463	N	GLU A 256	53.617	35.747	24.189	1.00 44.77	A
	ATOM	1464	CA	GLU A 256	54.932	35.144	24.382	1.00 49.15	A
	ATOM	1465	CB	GLU A 256	54.866	34.143	25.534	1.00 51.24	A
20	ATOM	1466	CG	GLU A 256	54.514	34.786	26.862	1.00 56.03	A
	ATOM	1467	CD	GLU A 256	54.053	33.780	27.893	1.00 58.83	A
	ATOM	1468	OE1	GLU A 256	54.766	32.776	28.107	1.00 62.13	A
	ATOM	1469	OE2	GLU A 256	52.979	33.996	28.494	1.00 60.34	A
	ATOM	1470	C	GLU A 256	55.475	34.456	23.137	1.00 50.09	A
25	ATOM	1471	O	GLU A 256	56.616	33.995	23.127	1.00 50.42	A
	ATOM	1472	N	LYS A 257	54.658	34.389	22.090	1.00 51.21	A
	ATOM	1473	CA	LYS A 257	55.064	33.746	20.845	1.00 51.22	A
	ATOM	1474	CB	LYS A 257	56.244	34.502	20.227	1.00 53.28	A
	ATOM	1475	CG	LYS A 257	56.558	34.125	18.790	1.00 55.19	A
30	ATOM	1476	CD	LYS A 257	57.709	34.961	18.253	1.00 57.52	A
	ATOM	1477	CE	LYS A 257	57.952	34.694	16.777	1.00 58.52	A
	ATOM	1478	NZ	LYS A 257	58.290	33.268	16.515	1.00 60.88	A
	ATOM	1479	C	LYS A 257	55.467	32.302	21.138	1.00 50.74	A
	ATOM	1480	O	LYS A 257	56.432	31.790	20.577	1.00 52.26	A
35	ATOM	1481	N	SER A 258	54.721	31.654	22.027	1.00 48.07	A
	ATOM	1482	CA	SER A 258	54.999	30.273	22.402	1.00 46.87	A
	ATOM	1483	CB	SER A 258	55.590	30.229	23.812	1.00 48.88	A
	ATOM	1484	OG	SER A 258	54.741	30.892	24.734	1.00 53.14	A
	ATOM	1485	C	SER A 258	53.735	29.415	22.342	1.00 44.07	A
40	ATOM	1486	O	SER A 258	52.617	29.932	22.417	1.00 44.17	A
	ATOM	1487	N	ALA A 259	53.917	28.105	22.204	1.00 38.30	A
	ATOM	1488	CA	ALA A 259	52.793	27.180	22.127	1.00 34.73	A
	ATOM	1489	CB	ALA A 259	52.551	26.779	20.684	1.00 34.16	A
	ATOM	1490	C	ALA A 259	53.042	25.940	22.977	1.00 32.34	A
45	ATOM	1491	O	ALA A 259	54.172	25.459	23.086	1.00 31.81	A
	ATOM	1492	N	CYS A 260	51.975	25.428	23.579	1.00 28.58	A
	ATOM	1493	CA	CYS A 260	52.056	24.244	24.425	1.00 26.27	A
	ATOM	1494	CB	CYS A 260	52.183	24.654	25.892	1.00 26.53	A
	ATOM	1495	SG	CYS A 260	50.846	25.739	26.469	1.00 32.91	A
50	ATOM	1496	C	CYS A 260	50.786	23.435	24.224	1.00 22.83	A
	ATOM	1497	O	CYS A 260	49.892	23.856	23.495	1.00 22.14	A
	ATOM	1498	N	LYS A 261	50.706	22.277	24.868	1.00 20.02	A
	ATOM	1499	CA	LYS A 261	49.526	21.434	24.744	1.00 20.65	A
	ATOM	1500	CB	LYS A 261	49.619	20.243	25.696	1.00 23.28	A
55	ATOM	1501	CG	LYS A 261	50.716	19.253	25.347	1.00 27.44	A
	ATOM	1502	CD	LYS A 261	50.732	18.117	26.350	1.00 29.98	A
	ATOM	1503	CE	LYS A 261	51.922	17.203	26.134	1.00 32.34	A
	ATOM	1504	NZ	LYS A 261	51.940	16.121	27.153	1.00 33.28	A
	ATOM	1505	C	LYS A 261	48.268	22.229	25.062	1.00 19.20	A

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     ATOM   1506  O    LYS A 261      47.253  22.092  24.387  1.00 18.08      A
     ATOM   1507  N    SER A 262      48.358  23.068  26.089  1.00 16.92      A
     ATOM   1508  CA   SER A 262      47.235  23.883  26.534  1.00 18.13      A
     ATOM   1509  CB   SER A 262      47.644  24.698  27.770  1.00 18.27      A
 5   ATOM   1510  OG   SER A 262      46.517  25.258  28.421  1.00 22.53      A
     ATOM   1511  C    SER A 262      46.736  24.811  25.424  1.00 16.77      A
     ATOM   1512  O    SER A 262      45.591  25.254  25.450  1.00 15.69      A
     ATOM   1513  N    SER A 263      47.595  25.118  24.456  1.00 16.44      A
     ATOM   1514  CA   SER A 263      47.175  25.970  23.347  1.00 16.89      A
10   ATOM   1515  CB   SER A 263      48.340  26.228  22.382  1.00 18.49      A
     ATOM   1516  OG   SER A 263      49.402  26.909  23.031  1.00 22.10      A
     ATOM   1517  C    SER A 263      46.040  25.257  22.612  1.00 17.79      A
     ATOM   1518  O    SER A 263      45.099  25.898  22.148  1.00 17.57      A
     ATOM   1519  N    ASP A 264      46.119  23.928  22.517  1.00 16.30      A
15   ATOM   1520  CA   ASP A 264      45.069  23.166  21.836  1.00 16.72      A
     ATOM   1521  CB   ASP A 264      45.483  21.704  21.620  1.00 15.92      A
     ATOM   1522  CG   ASP A 264      46.544  21.539  20.548  1.00 17.93      A
     ATOM   1523  OD1  ASP A 264      46.642  22.412  19.661  1.00 16.78      A
     ATOM   1524  OD2  ASP A 264      47.265  20.515  20.579  1.00 16.64      A
20   ATOM   1525  C    ASP A 264      43.773  23.194  22.646  1.00 17.67      A
     ATOM   1526  O    ASP A 264      42.681  23.197  22.076  1.00 18.27      A
     ATOM   1527  N    LEU A 265      43.898  23.205  23.974  1.00 15.49      A
     ATOM   1528  CA   LEU A 265      42.730  23.232  24.849  1.00 14.75      A
     ATOM   1529  CB   LEU A 265      43.147  23.038  26.313  1.00 11.38      A
25   ATOM   1530  CG   LEU A 265      43.711  21.641  26.621  1.00 14.04      A
     ATOM   1531  CD1  LEU A 265      44.249  21.579  28.052  1.00 13.96      A
     ATOM   1532  CD2  LEU A 265      42.619  20.603  26.416  1.00 11.62      A
     ATOM   1533  C    LEU A 265      41.999  24.557  24.675  1.00 15.13      A
     ATOM   1534  O    LEU A 265      40.777  24.620  24.785  1.00 16.75      A
30   ATOM   1535  N    TRP A 266      42.746  25.622  24.405  1.00 16.08      A
     ATOM   1536  CA   TRP A 266      42.118  26.918  24.184  1.00 16.96      A
     ATOM   1537  CB   TRP A 266      43.176  28.015  24.023  1.00 17.28      A
     ATOM   1538  CG   TRP A 266      42.618  29.326  23.521  1.00 20.54      A
     ATOM   1539  CD2  TRP A 266      42.313  30.490  24.301  1.00 20.07      A
35   ATOM   1540  CE2  TRP A 266      41.782  31.459  23.417  1.00 20.46      A
     ATOM   1541  CE3  TRP A 266      42.435  30.810  25.660  1.00 20.68      A
     ATOM   1542  CD1  TRP A 266      42.270  29.631  22.231  1.00 19.53      A
     ATOM   1543  NE1  TRP A 266      41.769  30.908  22.163  1.00 19.61      A
     ATOM   1544  CZ2  TRP A 266      41.372  32.727  23.850  1.00 20.90      A
40   ATOM   1545  CZ3  TRP A 266      42.026  32.073  26.091  1.00 19.45      A
     ATOM   1546  CH2  TRP A 266      41.501  33.015  25.185  1.00 20.71      A
     ATOM   1547  C    TRP A 266      41.284  26.795  22.913  1.00 17.22      A
     ATOM   1548  O    TRP A 266      40.139  27.240  22.863  1.00 18.03      A
     ATOM   1549  N    ALA A 267      41.863  26.181  21.886  1.00 17.50      A
45   ATOM   1550  CA   ALA A 267      41.155  25.990  20.626  1.00 16.16      A
     ATOM   1551  CB   ALA A 267      42.050  25.290  19.621  1.00 14.28      A
     ATOM   1552  C    ALA A 267      39.901  25.159  20.891  1.00 16.28      A
     ATOM   1553  O    ALA A 267      38.835  25.436  20.346  1.00 16.46      A
     ATOM   1554  N    LEU A 268      40.031  24.144  21.739  1.00 16.57      A
50   ATOM   1555  CA   LEU A 268      38.890  23.299  22.084  1.00 17.03      A
     ATOM   1556  CB   LEU A 268      39.292  22.260  23.139  1.00 15.35      A
     ATOM   1557  CG   LEU A 268      38.158  21.429  23.754  1.00 19.00      A
     ATOM   1558  CD1  LEU A 268      37.505  20.578  22.678  1.00 16.17      A
     ATOM   1559  CD2  LEU A 268      38.718  20.537  24.881  1.00 17.49      A
55   ATOM   1560  C    LEU A 268      37.766  24.179  22.628  1.00 15.72      A
     ATOM   1561  O    LEU A 268      36.603  24.031  22.247  1.00 15.28      A
     ATOM   1562  N    GLY A 269      38.110  25.099  23.520  1.00 14.34      A
     ATOM   1563  CA   GLY A 269      37.124  25.989  24.092  1.00 13.39      A
     ATOM   1564  C    GLY A 269      36.406  26.808  23.031  1.00 14.94      A
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	ATOM	1565	O	GLY A 269	35.193	27.014	23.114	1.00 14.76	A
	ATOM	1566	N	CYS A 270	37.146	27.279	22.030	1.00 13.86	A
	ATOM	1567	CA	CYS A 270	36.539	28.061	20.958	1.00 16.80	A
	ATOM	1568	CB	CYS A 270	37.611	28.634	20.023	1.00 15.97	A
5	ATOM	1569	SG	CYS A 270	38.751	29.810	20.780	1.00 20.48	A
	ATOM	1570	C	CYS A 270	35.598	27.175	20.140	1.00 17.50	A
	ATOM	1571	O	CYS A 270	34.516	27.604	19.741	1.00 18.38	A
	ATOM	1572	N	ILE A 271	36.022	25.939	19.887	1.00 16.99	A
	ATOM	1573	CA	ILE A 271	35.221	25.004	19.104	1.00 16.66	A
10	ATOM	1574	CB	ILE A 271	36.038	23.741	18.778	1.00 16.53	A
	ATOM	1575	CG2	ILE A 271	35.155	22.694	18.102	1.00 16.34	A
	ATOM	1576	CG1	ILE A 271	37.222	24.129	17.882	1.00 15.59	A
	ATOM	1577	CD1	ILE A 271	38.239	23.018	17.690	1.00 14.88	A
	ATOM	1578	C	ILE A 271	33.920	24.626	19.809	1.00 16.74	A
15	ATOM	1579	O	ILE A 271	32.865	24.576	19.179	1.00 17.12	A
	ATOM	1580	N	ILE A 272	33.990	24.357	21.111	1.00 16.13	A
	ATOM	1581	CA	ILE A 272	32.785	24.021	21.862	1.00 18.30	A
	ATOM	1582	CB	ILE A 272	33.097	23.747	23.346	1.00 17.77	A
	ATOM	1583	CG2	ILE A 272	31.796	23.666	24.152	1.00 17.96	A
20	ATOM	1584	CG1	ILE A 272	33.877	22.437	23.481	1.00 19.55	A
	ATOM	1585	CD1	ILE A 272	34.446	22.217	24.886	1.00 18.64	A
	ATOM	1586	C	ILE A 272	31.824	25.207	21.776	1.00 19.51	A
	ATOM	1587	O	ILE A 272	30.624	25.037	21.554	1.00 20.44	A
	ATOM	1588	N	TYR A 273	32.362	26.409	21.947	1.00 18.52	A
25	ATOM	1589	CA	TYR A 273	31.553	27.615	21.881	1.00 20.48	A
	ATOM	1590	CB	TYR A 273	32.418	28.847	22.162	1.00 18.98	A
	ATOM	1591	CG	TYR A 273	31.663	30.161	22.125	1.00 20.26	A
	ATOM	1592	CD1	TYR A 273	31.229	30.709	20.916	1.00 20.67	A
	ATOM	1593	CE1	TYR A 273	30.536	31.917	20.880	1.00 20.98	A
30	ATOM	1594	CD2	TYR A 273	31.383	30.857	23.302	1.00 19.82	A
	ATOM	1595	CE2	TYR A 273	30.691	32.062	23.280	1.00 20.62	A
	ATOM	1596	CZ	TYR A 273	30.271	32.587	22.067	1.00 21.15	A
	ATOM	1597	OH	TYR A 273	29.588	33.776	22.049	1.00 21.86	A
	ATOM	1598	C	TYR A 273	30.902	27.730	20.507	1.00 21.54	A
35	ATOM	1599	O	TYR A 273	29.719	28.049	20.401	1.00 22.80	A
	ATOM	1600	N	GLN A 274	31.676	27.454	19.461	1.00 21.05	A
	ATOM	1601	CA	GLN A 274	31.176	27.538	18.095	1.00 21.48	A
	ATOM	1602	CB	GLN A 274	32.323	27.341	17.097	1.00 21.41	A
	ATOM	1603	CG	GLN A 274	31.934	27.596	15.645	1.00 23.15	A
40	ATOM	1604	CD	GLN A 274	33.131	27.588	14.706	1.00 24.80	A
	ATOM	1605	OE1	GLN A 274	34.276	27.446	15.139	1.00 22.51	A
	ATOM	1606	NE2	GLN A 274	32.870	27.750	13.413	1.00 22.96	A
	ATOM	1607	C	GLN A 274	30.076	26.517	17.828	1.00 21.51	A
	ATOM	1608	O	GLN A 274	29.123	26.806	17.108	1.00 20.50	A
45	ATOM	1609	N	LEU A 275	30.207	25.324	18.403	1.00 21.44	A
	ATOM	1610	CA	LEU A 275	29.196	24.282	18.208	1.00 20.95	A
	ATOM	1611	CB	LEU A 275	29.645	22.958	18.846	1.00 19.11	A
	ATOM	1612	CG	LEU A 275	30.775	22.182	18.159	1.00 21.43	A
	ATOM	1613	CD1	LEU A 275	31.118	20.936	18.963	1.00 17.64	A
50	ATOM	1614	CD2	LEU A 275	30.342	21.795	16.754	1.00 20.34	A
	ATOM	1615	C	LEU A 275	27.860	24.697	18.815	1.00 21.32	A
	ATOM	1616	O	LEU A 275	26.802	24.461	18.229	1.00 19.75	A
	ATOM	1617	N	VAL A 276	27.921	25.322	19.987	1.00 19.10	A
	ATOM	1618	CA	VAL A 276	26.724	25.750	20.702	1.00 22.47	A
55	ATOM	1619	CB	VAL A 276	27.011	25.882	22.217	1.00 20.87	A
	ATOM	1620	CG1	VAL A 276	25.742	26.291	22.957	1.00 19.68	A
	ATOM	1621	CG2	VAL A 276	27.550	24.558	22.766	1.00 19.43	A
	ATOM	1622	C	VAL A 276	26.127	27.075	20.211	1.00 23.89	A
	ATOM	1623	O	VAL A 276	24.910	27.199	20.070	1.00 24.90	A

	ATOM	1624	N	ALA A 277	26.983	28.062	19.965	1.00 24.56	A
	ATOM	1625	CA	ALA A 277	26.533	29.374	19.518	1.00 24.72	A
	ATOM	1626	CB	ALA A 277	27.504	30.444	19.999	1.00 24.36	A
	ATOM	1627	C	ALA A 277	26.378	29.458	18.005	1.00 25.76	A
5	ATOM	1628	O	ALA A 277	25.577	30.242	17.502	1.00 26.39	A
	ATOM	1629	N	GLY A 278	27.142	28.651	17.280	1.00 25.13	A
	ATOM	1630	CA	GLY A 278	27.062	28.673	15.834	1.00 25.58	A
	ATOM	1631	C	GLY A 278	28.163	29.524	15.231	1.00 26.50	A
	ATOM	1632	O	GLY A 278	28.374	29.510	14.015	1.00 28.17	A
10	ATOM	1633	N	LEU A 279	28.866	30.262	16.086	1.00 24.44	A
	ATOM	1634	CA	LEU A 279	29.962	31.130	15.656	1.00 25.21	A
	ATOM	1635	CB	LEU A 279	29.468	32.575	15.500	1.00 25.78	A
	ATOM	1636	CG	LEU A 279	28.364	32.899	14.490	1.00 28.17	A
	ATOM	1637	CD1	LEU A 279	27.922	34.344	14.684	1.00 26.60	A
15	ATOM	1638	CD2	LEU A 279	28.862	32.670	13.071	1.00 26.52	A
	ATOM	1639	C	LEU A 279	31.093	31.116	16.687	1.00 23.47	A
	ATOM	1640	O	LEU A 279	30.848	30.994	17.882	1.00 24.44	A
	ATOM	1641	N	PRO A 280	32.349	31.239	16.236	1.00 23.35	A
	ATOM	1642	CD	PRO A 280	32.831	31.404	14.855	1.00 22.26	A
20	ATOM	1643	CA	PRO A 280	33.464	31.239	17.189	1.00 23.81	A
	ATOM	1644	CB	PRO A 280	34.692	31.293	16.282	1.00 23.24	A
	ATOM	1645	CG	PRO A 280	34.189	32.020	15.073	1.00 24.89	A
	ATOM	1646	C	PRO A 280	33.353	32.444	18.137	1.00 22.69	A
	ATOM	1647	O	PRO A 280	32.750	33.457	17.788	1.00 22.11	A
25	ATOM	1648	N	PRO A 281	33.939	32.344	19.345	1.00 23.06	A
	ATOM	1649	CD	PRO A 281	34.810	31.223	19.734	1.00 21.37	A
	ATOM	1650	CA	PRO A 281	33.935	33.375	20.395	1.00 23.67	A
	ATOM	1651	CB	PRO A 281	34.781	32.751	21.509	1.00 24.89	A
	ATOM	1652	CG	PRO A 281	34.749	31.287	21.219	1.00 25.24	A
30	ATOM	1653	C	PRO A 281	34.481	34.752	20.017	1.00 23.75	A
	ATOM	1654	O	PRO A 281	33.869	35.781	20.317	1.00 21.02	A
	ATOM	1655	N	PHE A 282	35.644	34.763	19.379	1.00 22.17	A
	ATOM	1656	CA	PHE A 282	36.293	36.007	18.998	1.00 23.16	A
	ATOM	1657	CB	PHE A 282	37.765	35.943	19.406	1.00 21.01	A
35	ATOM	1658	CG	PHE A 282	37.975	35.482	20.822	1.00 22.66	A
	ATOM	1659	CD1	PHE A 282	37.806	36.361	21.888	1.00 20.06	A
	ATOM	1660	CD2	PHE A 282	38.291	34.151	21.093	1.00 20.72	A
	ATOM	1661	CE1	PHE A 282	37.947	35.921	23.206	1.00 22.66	A
	ATOM	1662	CE2	PHE A 282	38.433	33.702	22.405	1.00 20.97	A
40	ATOM	1663	CZ	PHE A 282	38.261	34.590	23.466	1.00 19.58	A
	ATOM	1664	C	PHE A 282	36.169	36.263	17.503	1.00 24.39	A
	ATOM	1665	O	PHE A 282	36.802	35.585	16.694	1.00 25.80	A
	ATOM	1666	N	ARG A 283	35.355	37.248	17.142	1.00 24.99	A
	ATOM	1667	CA	ARG A 283	35.141	37.594	15.741	1.00 26.33	A
45	ATOM	1668	CB	ARG A 283	33.721	37.209	15.316	1.00 28.91	A
	ATOM	1669	CG	ARG A 283	33.293	35.808	15.724	1.00 30.27	A
	ATOM	1670	CD	ARG A 283	31.904	35.493	15.188	1.00 33.36	A
	ATOM	1671	NE	ARG A 283	30.890	36.392	15.733	1.00 32.76	A
	ATOM	1672	CZ	ARG A 283	30.372	36.287	16.952	1.00 34.79	A
50	ATOM	1673	NH1	ARG A 283	30.767	35.317	17.768	1.00 35.77	A
	ATOM	1674	NH2	ARG A 283	29.458	37.156	17.359	1.00 36.12	A
	ATOM	1675	C	ARG A 283	35.328	39.096	15.544	1.00 26.47	A
	ATOM	1676	O	ARG A 283	35.029	39.888	16.438	1.00 26.28	A
	ATOM	1677	N	ALA A 284	35.818	39.486	14.373	1.00 26.70	A
55	ATOM	1678	CA	ALA A 284	36.033	40.899	14.079	1.00 27.84	A
	ATOM	1679	CB	ALA A 284	37.188	41.442	14.914	1.00 26.24	A
	ATOM	1680	C	ALA A 284	36.287	41.077	12.602	1.00 28.35	A
	ATOM	1681	O	ALA A 284	36.560	40.101	11.891	1.00 29.91	A
	ATOM	1682	N	GLY A 285	36.332	42.329	12.153	1.00 29.29	A

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      ATOM  1683  CA   GLY A 285   36.577 42.631 10.753  1.00 29.52       A
      ATOM  1684  C    GLY A 285   37.893 42.156 10.168  1.00 30.12       A
      ATOM  1685  O    GLY A 285   37.974 41.862  8.976  1.00 30.60       A
      ATOM  1686  N    ASN A 286   38.939 42.097 10.983  1.00 28.49       A
  5   ATOM  1687  CA   ASN A 286   40.231 41.644 10.489  1.00 26.71       A
      ATOM  1688  CB   ASN A 286   41.050 42.825  9.945  1.00 26.11       A
      ATOM  1689  CG   ASN A 286   41.310 43.900 10.990  1.00 27.83       A
      ATOM  1690  OD1  ASN A 286   41.877 43.631 12.049  1.00 27.84       A
      ATOM  1691  ND2  ASN A 286   40.908 45.131 10.685  1.00 25.95       A
 10   ATOM  1692  C    ASN A 286   40.997 40.924 11.584  1.00 26.03       A
      ATOM  1693  O    ASN A 286   40.540 40.851 12.723  1.00 25.66       A
      ATOM  1694  N    GLU A 287   42.162 40.391 11.239  1.00 24.81       A
      ATOM  1695  CA   GLU A 287   42.965 39.662 12.206  1.00 27.59       A
      ATOM  1696  CB   GLU A 287   44.145 38.985 11.510  1.00 30.17       A
 15   ATOM  1697  CG   GLU A 287   43.776 37.632 10.931  1.00 38.21       A
      ATOM  1698  CD   GLU A 287   44.900 36.998 10.140  1.00 41.86       A
      ATOM  1699  OE1  GLU A 287   46.061 37.036 10.608  1.00 43.08       A
      ATOM  1700  OE2  GLU A 287   44.612 36.449  9.052  1.00 45.22       A
      ATOM  1701  C    GLU A 287   43.459 40.485 13.383  1.00 25.05       A
 20   ATOM  1702  O    GLU A 287   43.382 40.030 14.521  1.00 26.41       A
      ATOM  1703  N    TYR A 288   43.966 41.685 13.122  1.00 23.04       A
      ATOM  1704  CA   TYR A 288   44.460 42.528 14.205  1.00 22.34       A
      ATOM  1705  CB   TYR A 288   44.867 43.913 13.691  1.00 21.07       A
      ATOM  1706  CG   TYR A 288   45.275 44.858 14.805  1.00 21.07       A
 25   ATOM  1707  CD1  TYR A 288   46.533 44.762 15.405  1.00 21.23       A
      ATOM  1708  CE1  TYR A 288   46.891 45.588 16.475  1.00 20.43       A
      ATOM  1709  CD2  TYR A 288   44.380 45.809 15.302  1.00 22.32       A
      ATOM  1710  CE2  TYR A 288   44.725 46.637 16.373  1.00 23.28       A
      ATOM  1711  CZ   TYR A 288   45.981 46.518 16.953  1.00 22.96       A
 30   ATOM  1712  OH   TYR A 288   46.316 47.313 18.024  1.00 23.18       A
      ATOM  1713  C    TYR A 288   43.402 42.698 15.288  1.00 21.38       A
      ATOM  1714  O    TYR A 288   43.710 42.616 16.473  1.00 22.09       A
      ATOM  1715  N    LEU A 289   42.159 42.939 14.874  1.00 21.88       A
      ATOM  1716  CA   LEU A 289   41.055 43.130 15.811  1.00 21.98       A
 35   ATOM  1717  CB   LEU A 289   39.821 43.673 15.078  1.00 22.90       A
      ATOM  1718  CG   LEU A 289   39.986 45.130 14.601  1.00 26.52       A
      ATOM  1719  CD1  LEU A 289   38.706 45.436 13.696  1.00 26.55       A
      ATOM  1720  CD2  LEU A 289   39.914 46.071 15.807  1.00 23.13       A
      ATOM  1721  C    LEU A 289   40.686 41.849 16.560  1.00 21.24       A
 40   ATOM  1722  O    LEU A 289   40.256 41.897 17.715  1.00 20.72       A
      ATOM  1723  N    ILE A 290   40.843 40.708 15.900  1.00 19.62       A
      ATOM  1724  CA   ILE A 290   40.538 39.433 16.533  1.00 18.54       A
      ATOM  1725  CB   ILE A 290   40.560 38.281 15.509  1.00 18.52       A
      ATOM  1726  CG2  ILE A 290   40.503 36.934 16.234  1.00 17.63       A
 45   ATOM  1727  CG1  ILE A 290   39.378 38.429 14.545  1.00 18.88       A
      ATOM  1728  CD1  ILE A 290   39.421 37.483 13.357  1.00 19.81       A
      ATOM  1729  C    ILE A 290   41.578 39.167 17.618  1.00 19.09       A
      ATOM  1730  O    ILE A 290   41.236 38.788 18.737  1.00 18.20       A
      ATOM  1731  N    PHE A 291   42.849 39.376 17.286  1.00 18.76       A
 50   ATOM  1732  CA   PHE A 291   43.925 39.156 18.247  1.00 20.75       A
      ATOM  1733  CB   PHE A 291   45.286 39.434 17.606  1.00 20.71       A
      ATOM  1734  CG   PHE A 291   45.644 38.480 16.503  1.00 22.92       A
      ATOM  1735  CD1  PHE A 291   45.065 37.214 16.443  1.00 22.98       A
      ATOM  1736  CD2  PHE A 291   46.588 38.830 15.543  1.00 22.91       A
 55   ATOM  1737  CE1  PHE A 291   45.423 36.310 15.440  1.00 24.51       A
      ATOM  1738  CE2  PHE A 291   46.954 37.931 14.535  1.00 25.54       A
      ATOM  1739  CZ   PHE A 291   46.370 36.670 14.485  1.00 23.29       A
      ATOM  1740  C    PHE A 291   43.739 40.061 19.451  1.00 21.72       A
      ATOM  1741  O    PHE A 291   43.992 39.671 20.593  1.00 22.32       A
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      ATOM   1742  N    GLN A 292     43.284 41.275 19.178  1.00 23.27      A
      ATOM   1743  CA   GLN A 292     43.055 42.264 20.216  1.00 24.01      A
      ATOM   1744  CB   GLN A 292     42.574 43.559 19.562  1.00 25.77      A
      ATOM   1745  CG   GLN A 292     42.577 44.773 20.447  1.00 28.45      A
   5  ATOM   1746  CD   GLN A 292     42.469 46.057 19.638  1.00 29.83      A
      ATOM   1747  OE1  GLN A 292     41.520 46.244 18.872  1.00 27.16      A
      ATOM   1748  NE2  GLN A 292     43.449 46.944 19.799  1.00 27.61      A
      ATOM   1749  C    GLN A 292     42.018 41.733 21.204  1.00 22.97      A
      ATOM   1750  O    GLN A 292     42.200 41.832 22.415  1.00 21.64      A
  10  ATOM   1751  N    LYS A 293     40.937 41.154 20.687  1.00 21.82      A
      ATOM   1752  CA   LYS A 293     39.895 40.612 21.558  1.00 22.18      A
      ATOM   1753  CB   LYS A 293     38.664 40.223 20.740  1.00 22.69      A
      ATOM   1754  CG   LYS A 293     37.919 41.407 20.153  1.00 25.78      A
      ATOM   1755  CD   LYS A 293     36.651 40.961 19.429  1.00 27.88      A
  15  ATOM   1756  CE   LYS A 293     35.857 42.161 18.926  1.00 30.85      A
      ATOM   1757  NZ   LYS A 293     34.612 41.750 18.214  1.00 32.98      A
      ATOM   1758  C    LYS A 293     40.398 39.398 22.343  1.00 21.20      A
      ATOM   1759  O    LYS A 293     40.041 39.204 23.509  1.00 22.01      A
      ATOM   1760  N    ILE A 294     41.226 38.583 21.702  1.00 19.91      A
  20  ATOM   1761  CA   ILE A 294     41.774 37.394 22.347  1.00 20.28      A
      ATOM   1762  CB   ILE A 294     42.631 36.575 21.349  1.00 18.98      A
      ATOM   1763  CG2  ILE A 294     43.481 35.550 22.098  1.00 17.70      A
      ATOM   1764  CG1  ILE A 294     41.716 35.897 20.318  1.00 17.93      A
      ATOM   1765  CD1  ILE A 294     42.467 35.237 19.178  1.00 16.21      A
  25  ATOM   1766  C    ILE A 294     42.618 37.727 23.587  1.00 21.94      A
      ATOM   1767  O    ILE A 294     42.366 37.199 24.673  1.00 20.86      A
      ATOM   1768  N    ILE A 295     43.610 38.600 23.439  1.00 21.88      A
      ATOM   1769  CA   ILE A 295     44.461 38.934 24.582  1.00 24.25      A
      ATOM   1770  CB   ILE A 295     45.668 39.805 24.175  1.00 23.93      A
  30  ATOM   1771  CG2  ILE A 295     46.514 39.066 23.140  1.00 24.61      A
      ATOM   1772  CG1  ILE A 295     45.189 41.151 23.637  1.00 24.58      A
      ATOM   1773  CD1  ILE A 295     46.317 42.149 23.433  1.00 26.69      A
      ATOM   1774  C    ILE A 295     43.720 39.636 25.717  1.00 24.80      A
      ATOM   1775  O    ILE A 295     44.214 39.687 26.842  1.00 24.76      A
  35  ATOM   1776  N    LYS A 296     42.539 40.173 25.425  1.00 25.33      A
      ATOM   1777  CA   LYS A 296     41.743 40.853 26.444  1.00 26.80      A
      ATOM   1778  CB   LYS A 296     41.178 42.170 25.894  1.00 27.39      A
      ATOM   1779  CG   LYS A 296     42.240 43.141 25.413  1.00 31.79      A
      ATOM   1780  CD   LYS A 296     41.634 44.410 24.826  1.00 35.56      A
  40  ATOM   1781  CE   LYS A 296     41.009 45.283 25.900  1.00 39.29      A
      ATOM   1782  NZ   LYS A 296     40.564 46.603 25.357  1.00 41.72      A
      ATOM   1783  C    LYS A 296     40.593 39.958 26.893  1.00 25.50      A
      ATOM   1784  O    LYS A 296     39.770 40.361 27.713  1.00 24.02      A
      ATOM   1785  N    LEU A 297     40.550 38.742 26.349  1.00 25.67      A
  45  ATOM   1786  CA   LEU A 297     39.500 37.777 26.666  1.00 25.16      A
      ATOM   1787  CB   LEU A 297     39.632 37.285 28.111  1.00 24.80      A
      ATOM   1788  CG   LEU A 297     38.766 36.068 28.460  1.00 26.43      A
      ATOM   1789  CD1  LEU A 297     39.238 34.852 27.646  1.00 26.70      A
      ATOM   1790  CD2  LEU A 297     38.856 35.777 29.951  1.00 24.84      A
  50  ATOM   1791  C    LEU A 297     38.151 38.459 26.467  1.00 25.11      A
      ATOM   1792  O    LEU A 297     37.261 38.378 27.309  1.00 25.28      A
      ATOM   1793  N    GLU A 298     38.007 39.127 25.331  1.00 24.98      A
      ATOM   1794  CA   GLU A 298     36.786 39.847 25.023  1.00 25.31      A
      ATOM   1795  CB   GLU A 298     37.143 41.139 24.291  1.00 27.13      A
  55  ATOM   1796  CG   GLU A 298     35.991 42.092 24.108  1.00 31.28      A
      ATOM   1797  CD   GLU A 298     36.419 43.362 23.410  1.00 34.40      A
      ATOM   1798  OE1  GLU A 298     37.348 44.027 23.918  1.00 35.90      A
      ATOM   1799  OE2  GLU A 298     35.832 43.693 22.359  1.00 36.16      A
      ATOM   1800  C    GLU A 298     35.766 39.057 24.207  1.00 23.79      A
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     ATOM   1801  O    GLU A 298      35.832 39.017 22.979  1.00 24.35      A
     ATOM   1802  N    TYR A 299      34.825 38.427 24.902  1.00 23.45      A
     ATOM   1803  CA   TYR A 299      33.760 37.663 24.265  1.00 23.98      A
     ATOM   1804  CB   TYR A 299      34.264 36.304 23.755  1.00 20.13      A
  5  ATOM   1805  CG   TYR A 299      34.348 35.233 24.828  1.00 21.17      A
     ATOM   1806  CD1  TYR A 299      35.336 35.279 25.810  1.00 19.32      A
     ATOM   1807  CE1  TYR A 299      35.389 34.332 26.826  1.00 19.30      A
     ATOM   1808  CD2  TYR A 299      33.410 34.201 24.888  1.00 18.96      A
     ATOM   1809  CE2  TYR A 299      33.456 33.243 25.907  1.00 19.41      A
 10  ATOM   1810  CZ   TYR A 299      34.449 33.321 26.870  1.00 18.79      A
     ATOM   1811  OH   TYR A 299      34.511 32.401 27.881  1.00 18.77      A
     ATOM   1812  C    TYR A 299      32.699 37.437 25.331  1.00 25.20      A
     ATOM   1813  O    TYR A 299      32.942 37.681 26.506  1.00 26.46      A
     ATOM   1814  N    ASP A 300      31.522 36.981 24.927  1.00 26.94      A
 15  ATOM   1815  CA   ASP A 300      30.467 36.710 25.891  1.00 30.60      A
     ATOM   1816  CB   ASP A 300      29.665 37.981 26.179  1.00 35.86      A
     ATOM   1817  CG   ASP A 300      29.228 38.687 24.923  1.00 42.04      A
     ATOM   1818  OD1  ASP A 300      28.450 38.088 24.149  1.00 45.98      A
     ATOM   1819  OD2  ASP A 300      29.666 39.840 24.707  1.00 45.69      A
 20  ATOM   1820  C    ASP A 300      29.564 35.608 25.363  1.00 29.26      A
     ATOM   1821  O    ASP A 300      29.590 35.299 24.172  1.00 28.64      A
     ATOM   1822  N    PHE A 301      28.778 35.011 26.253  1.00 28.96      A
     ATOM   1823  CA   PHE A 301      27.884 33.924 25.871  1.00 30.48      A
     ATOM   1824  CB   PHE A 301      27.818 32.854 26.968  1.00 29.17      A
 25  ATOM   1825  CG   PHE A 301      29.147 32.279 27.356  1.00 29.29      A
     ATOM   1826  CD1  PHE A 301      29.978 32.949 28.245  1.00 27.31      A
     ATOM   1827  CD2  PHE A 301      29.560 31.050 26.845  1.00 27.89      A
     ATOM   1828  CE1  PHE A 301      31.205 32.403 28.625  1.00 28.83      A
     ATOM   1829  CE2  PHE A 301      30.781 30.498 27.217  1.00 28.05      A
 30  ATOM   1830  CZ   PHE A 301      31.605 31.175 28.110  1.00 28.27      A
     ATOM   1831  C    PHE A 301      26.459 34.384 25.619  1.00 32.20      A
     ATOM   1832  O    PHE A 301      25.946 35.261 26.317  1.00 32.36      A
     ATOM   1833  N    PRO A 302      25.798 33.804 24.607  1.00 33.29      A
     ATOM   1834  CD   PRO A 302      26.313 32.943 23.529  1.00 34.04      A
 35  ATOM   1835  CA   PRO A 302      24.415 34.199 24.341  1.00 35.24      A
     ATOM   1836  CB   PRO A 302      24.144 33.608 22.959  1.00 34.01      A
     ATOM   1837  CG   PRO A 302      25.041 32.413 22.921  1.00 35.48      A
     ATOM   1838  C    PRO A 302      23.567 33.561 25.444  1.00 37.39      A
     ATOM   1839  O    PRO A 302      23.935 32.518 25.986  1.00 38.49      A
 40  ATOM   1840  N    ALA A 303      22.447 34.188 25.783  1.00 39.36      A
     ATOM   1841  CA   ALA A 303      21.572 33.692 26.843  1.00 40.65      A
     ATOM   1842  CB   ALA A 303      20.280 34.506 26.862  1.00 41.66      A
     ATOM   1843  C    ALA A 303      21.238 32.197 26.814  1.00 41.25      A
     ATOM   1844  O    ALA A 303      21.253 31.537 27.854  1.00 43.16      A
 45  ATOM   1845  N    ALA A 304      20.945 31.665 25.631  1.00 41.04      A
     ATOM   1846  CA   ALA A 304      20.569 30.258 25.480  1.00 40.66      A
     ATOM   1847  CB   ALA A 304      20.121 30.004 24.040  1.00 41.36      A
     ATOM   1848  C    ALA A 304      21.628 29.223 25.876  1.00 39.61      A
     ATOM   1849  O    ALA A 304      21.298 28.156 26.395  1.00 40.61      A
 50  ATOM   1850  N    PHE A 305      22.891 29.543 25.617  1.00 36.21      A
     ATOM   1851  CA   PHE A 305      24.022 28.662 25.909  1.00 32.08      A
     ATOM   1852  CB   PHE A 305      25.259 29.519 26.187  1.00 29.46      A
     ATOM   1853  CG   PHE A 305      26.536 28.917 25.690  1.00 28.15      A
     ATOM   1854  CD1  PHE A 305      27.146 27.875 26.377  1.00 26.20      A
 55  ATOM   1855  CD2  PHE A 305      27.127 29.386 24.521  1.00 27.05      A
     ATOM   1856  CE1  PHE A 305      28.330 27.308 25.908  1.00 26.92      A
     ATOM   1857  CE2  PHE A 305      28.312 28.826 24.042  1.00 26.62      A
     ATOM   1858  CZ   PHE A 305      28.914 27.786 24.737  1.00 26.61      A
     ATOM   1859  C    PHE A 305      23.811 27.664 27.057  1.00 30.09      A
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      ATOM   1860  O    PHE A 305      23.518  28.051  28.187  1.00 31.51        A
      ATOM   1861  N    PHE A 306      23.964  26.378  26.758  1.00 27.01        A
      ATOM   1862  CA   PHE A 306      23.801  25.334  27.769  1.00 26.30        A
      ATOM   1863  CB   PHE A 306      24.157  23.970  27.110  1.00 25.03        A
 5    ATOM   1864  CG   PHE A 306      23.548  23.725  25.815  1.00 27.24        A
      ATOM   1865  CD1  PHE A 306      22.170  23.831  25.622  1.00 28.40        A
      ATOM   1866  CD2  PHE A 306      24.350  23.386  24.728  1.00 27.84        A
      ATOM   1867  CE1  PHE A 306      21.601  23.603  24.365  1.00 28.05        A
      ATOM   1868  CE2  PHE A 306      23.792  23.155  23.465  1.00 28.31        A
10    ATOM   1869  CZ   PHE A 306      22.415  23.263  23.283  1.00 28.00        A
      ATOM   1870  C    PHE A 306      24.711  25.652  28.961  1.00 26.23        A
      ATOM   1871  O    PHE A 306      25.927  25.775  28.811  1.00 25.59        A
      ATOM   1872  N    PRO A 307      24.125  25.796  30.163  1.00 26.67        A
      ATOM   1873  CD   PRO A 307      22.685  25.625  30.430  1.00 27.95        A
15    ATOM   1874  CA   PRO A 307      24.842  26.110  31.405  1.00 26.59        A
      ATOM   1875  CB   PRO A 307      23.795  25.832  32.481  1.00 26.14        A
      ATOM   1876  CG   PRO A 307      22.531  26.250  31.803  1.00 27.86        A
      ATOM   1877  C    PRO A 307      26.145  25.355  31.659  1.00 25.58        A
      ATOM   1878  O    PRO A 307      27.189  25.964  31.900  1.00 22.65        A
20    ATOM   1879  N    LYS A 308      26.085  24.031  31.620  1.00 24.46        A
      ATOM   1880  CA   LYS A 308      27.274  23.232  31.867  1.00 23.91        A
      ATOM   1881  CB   LYS A 308      26.887  21.760  32.024  1.00 23.25        A
      ATOM   1882  CG   LYS A 308      26.062  21.532  33.285  1.00 28.49        A
      ATOM   1883  CD   LYS A 308      25.618  20.093  33.466  1.00 30.17        A
25    ATOM   1884  CE   LYS A 308      24.760  19.973  34.722  1.00 33.12        A
      ATOM   1885  NZ   LYS A 308      24.122  18.636  34.860  1.00 34.13        A
      ATOM   1886  C    LYS A 308      28.314  23.426  30.769  1.00 22.84        A
      ATOM   1887  O    LYS A 308      29.514  23.411  31.042  1.00 22.46        A
      ATOM   1888  N    ALA A 309      27.861  23.621  29.534  1.00 21.59        A
30    ATOM   1889  CA   ALA A 309      28.792  23.848  28.432  1.00 20.02        A
      ATOM   1890  CB   ALA A 309      28.056  23.856  27.106  1.00 18.80        A
      ATOM   1891  C    ALA A 309      29.481  25.191  28.662  1.00 21.41        A
      ATOM   1892  O    ALA A 309      30.680  25.335  28.427  1.00 21.39        A
      ATOM   1893  N    ARG A 310      28.717  26.179  29.121  1.00 21.39        A
35    ATOM   1894  CA   ARG A 310      29.290  27.494  29.388  1.00 22.02        A
      ATOM   1895  CB   ARG A 310      28.213  28.479  29.854  1.00 22.39        A
      ATOM   1896  CG   ARG A 310      28.806  29.756  30.436  1.00 25.30        A
      ATOM   1897  CD   ARG A 310      27.780  30.852  30.664  1.00 28.33        A
      ATOM   1898  NE   ARG A 310      28.420  32.039  31.230  1.00 30.18        A
40    ATOM   1899  CZ   ARG A 310      27.901  33.263  31.203  1.00 32.07        A
      ATOM   1900  NH1  ARG A 310      26.719  33.477  30.634  1.00 31.19        A
      ATOM   1901  NH2  ARG A 310      28.567  34.277  31.742  1.00 30.49        A
      ATOM   1902  C    ARG A 310      30.376  27.388  30.458  1.00 21.65        A
      ATOM   1903  O    ARG A 310      31.464  27.949  30.311  1.00 20.36        A
45    ATOM   1904  N    ASP A 311      30.074  26.677  31.541  1.00 19.57        A
      ATOM   1905  CA   ASP A 311      31.043  26.512  32.615  1.00 20.18        A
      ATOM   1906  CB   ASP A 311      30.460  25.649  33.739  1.00 20.39        A
      ATOM   1907  CG   ASP A 311      31.439  25.446  34.881  1.00 23.35        A
      ATOM   1908  OD1  ASP A 311      32.158  24.428  34.885  1.00 24.91        A
50    ATOM   1909  OD2  ASP A 311      31.500  26.312  35.776  1.00 26.96        A
      ATOM   1910  C    ASP A 311      32.322  25.877  32.073  1.00 19.73        A
      ATOM   1911  O    ASP A 311      33.422  26.289  32.439  1.00 19.30        A
      ATOM   1912  N    LEU A 312      32.179  24.891  31.188  1.00 16.32        A
      ATOM   1913  CA   LEU A 312      33.349  24.226  30.611  1.00 16.66        A
55    ATOM   1914  CB   LEU A 312      32.927  23.035  29.744  1.00 16.12        A
      ATOM   1915  CG   LEU A 312      34.050  22.320  28.974  1.00 14.73        A
      ATOM   1916  CD1  LEU A 312      35.192  21.935  29.912  1.00 14.56        A
      ATOM   1917  CD2  LEU A 312      33.477  21.084  28.289  1.00 14.22        A
      ATOM   1918  C    LEU A 312      34.181  25.189  29.774  1.00 16.61        A
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      ATOM   1919  O    LEU A 312      35.402  25.241  29.910  1.00 16.20      A
      ATOM   1920  N    VAL A 313      33.515  25.949  28.908  1.00 16.20      A
      ATOM   1921  CA   VAL A 313      34.207  26.907  28.058  1.00 15.37      A
      ATOM   1922  CB   VAL A 313      33.216  27.648  27.130  1.00 16.42      A
   5  ATOM   1923  CG1  VAL A 313      33.915  28.796  26.426  1.00 16.93      A
      ATOM   1924  CG2  VAL A 313      32.644  26.672  26.103  1.00 17.88      A
      ATOM   1925  C    VAL A 313      34.960  27.923  28.911  1.00 17.39      A
      ATOM   1926  O    VAL A 313      36.093  28.294  28.591  1.00 18.00      A
      ATOM   1927  N    GLU A 314      34.342  28.364  30.004  1.00 17.61      A
  10  ATOM   1928  CA   GLU A 314      34.986  29.331  30.885  1.00 20.43      A
      ATOM   1929  CB   GLU A 314      34.009  29.816  31.959  1.00 22.14      A
      ATOM   1930  CG   GLU A 314      32.800  30.550  31.396  1.00 26.52      A
      ATOM   1931  CD   GLU A 314      31.852  31.025  32.478  1.00 31.26      A
      ATOM   1932  OE1  GLU A 314      31.580  30.246  33.417  1.00 33.48      A
  15  ATOM   1933  OE2  GLU A 314      31.370  32.173  32.387  1.00 34.81      A
      ATOM   1934  C    GLU A 314      36.217  28.721  31.539  1.00 19.15      A
      ATOM   1935  O    GLU A 314      37.134  29.433  31.934  1.00 21.47      A
      ATOM   1936  N    LYS A 315      36.245  27.400  31.651  1.00 19.51      A
      ATOM   1937  CA   LYS A 315      37.394  26.749  32.258  1.00 19.17      A
  20  ATOM   1938  CB   LYS A 315      36.946  25.514  33.043  1.00 18.84      A
      ATOM   1939  CG   LYS A 315      36.280  25.885  34.368  1.00 19.62      A
      ATOM   1940  CD   LYS A 315      35.653  24.696  35.073  1.00 19.22      A
      ATOM   1941  CE   LYS A 315      35.070  25.095  36.427  1.00 21.00      A
      ATOM   1942  NZ   LYS A 315      36.119  25.552  37.381  1.00 19.53      A
  25  ATOM   1943  C    LYS A 315      38.452  26.393  31.218  1.00 18.96      A
      ATOM   1944  O    LYS A 315      39.511  25.873  31.561  1.00 19.85      A
      ATOM   1945  N    LEU A 316      38.164  26.691  29.950  1.00 17.08      A
      ATOM   1946  CA   LEU A 316      39.102  26.429  28.854  1.00 16.41      A
      ATOM   1947  CB   LEU A 316      38.414  25.636  27.738  1.00 13.81      A
  30  ATOM   1948  CG   LEU A 316      38.028  24.201  28.115  1.00 14.39      A
      ATOM   1949  CD1  LEU A 316      37.139  23.597  27.031  1.00 12.38      A
      ATOM   1950  CD2  LEU A 316      39.302  23.373  28.309  1.00 12.77      A
      ATOM   1951  C    LEU A 316      39.652  27.743  28.290  1.00 17.12      A
      ATOM   1952  O    LEU A 316      40.851  27.860  28.023  1.00 16.53      A
  35  ATOM   1953  N    LEU A 317      38.780  28.729  28.105  1.00 16.27      A
      ATOM   1954  CA   LEU A 317      39.228  30.022  27.596  1.00 17.52      A
      ATOM   1955  CB   LEU A 317      38.083  30.752  26.887  1.00 16.37      A
      ATOM   1956  CG   LEU A 317      37.448  29.973  25.727  1.00 18.81      A
      ATOM   1957  CD1  LEU A 317      36.415  30.851  25.018  1.00 16.47      A
  40  ATOM   1958  CD2  LEU A 317      38.528  29.526  24.741  1.00 17.87      A
      ATOM   1959  C    LEU A 317      39.745  30.841  28.774  1.00 18.27      A
      ATOM   1960  O    LEU A 317      39.078  31.753  29.273  1.00 18.58      A
      ATOM   1961  N    VAL A 318      40.937  30.475  29.229  1.00 18.02      A
      ATOM   1962  CA   VAL A 318      41.593  31.141  30.342  1.00 18.85      A
  45  ATOM   1963  CB   VAL A 318      41.846  30.153  31.500  1.00 19.91      A
      ATOM   1964  CG1  VAL A 318      42.590  30.848  32.634  1.00 20.01      A
      ATOM   1965  CG2  VAL A 318      40.520  29.584  31.990  1.00 19.44      A
      ATOM   1966  C    VAL A 318      42.923  31.657  29.811  1.00 19.67      A
      ATOM   1967  O    VAL A 318      43.690  30.902  29.208  1.00 18.26      A
  50  ATOM   1968  N    LEU A 319      43.197  32.939  30.028  1.00 20.07      A
      ATOM   1969  CA   LEU A 319      44.436  33.533  29.538  1.00 20.98      A
      ATOM   1970  CB   LEU A 319      44.521  35.002  29.968  1.00 21.64      A
      ATOM   1971  CG   LEU A 319      43.418  35.908  29.408  1.00 24.38      A
      ATOM   1972  CD1  LEU A 319      43.606  37.332  29.935  1.00 23.28      A
  55  ATOM   1973  CD2  LEU A 319      43.453  35.887  27.875  1.00 24.33      A
      ATOM   1974  C    LEU A 319      45.680  32.774  29.994  1.00 20.38      A
      ATOM   1975  O    LEU A 319      46.568  32.496  29.192  1.00 21.34      A
      ATOM   1976  N    ASP A 320      45.742  32.440  31.280  1.00 20.22      A
      ATOM   1977  CA   ASP A 320      46.879  31.707  31.833  1.00 20.90      A
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     ATOM   1978   CB   ASP A 320      46.842  31.760  33.365  1.00 20.76      A
     ATOM   1979   CG   ASP A 320      48.049  31.102  34.004  1.00 21.51      A
     ATOM   1980   OD1  ASP A 320      48.669  30.226  33.367  1.00 23.46      A
     ATOM   1981   OD2  ASP A 320      48.371  31.450  35.159  1.00 23.89      A
  5  ATOM   1982   C    ASP A 320      46.814  30.247  31.367  1.00 20.06      A
     ATOM   1983   O    ASP A 320      45.988  29.476  31.840  1.00 20.54      A
     ATOM   1984   N    ALA A 321      47.700  29.876  30.451  1.00 20.68      A
     ATOM   1985   CA   ALA A 321      47.733  28.522  29.903  1.00 22.04      A
     ATOM   1986   CB   ALA A 321      48.860  28.411  28.881  1.00 20.75      A
 10  ATOM   1987   C    ALA A 321      47.858  27.400  30.940  1.00 21.62      A
     ATOM   1988   O    ALA A 321      47.482  26.259  30.665  1.00 21.99      A
     ATOM   1989   N    THR A 322      48.372  27.715  32.127  1.00 20.89      A
     ATOM   1990   CA   THR A 322      48.531  26.698  33.167  1.00 20.82      A
     ATOM   1991   CB   THR A 322      49.670  27.051  34.146  1.00 19.47      A
 15  ATOM   1992   OG1  THR A 322      49.341  28.253  34.848  1.00 20.19      A
     ATOM   1993   CG2  THR A 322      50.981  27.249  33.394  1.00 21.59      A
     ATOM   1994   C    THR A 322      47.264  26.498  33.983  1.00 19.55      A
     ATOM   1995   O    THR A 322      47.235  25.673  34.894  1.00 21.13      A
     ATOM   1996   N    LYS A 323      46.216  27.248  33.661  1.00 19.33      A
 20  ATOM   1997   CA   LYS A 323      44.962  27.122  34.392  1.00 21.20      A
     ATOM   1998   CB   LYS A 323      44.580  28.460  35.030  1.00 23.75      A
     ATOM   1999   CG   LYS A 323      45.562  28.933  36.084  1.00 28.45      A
     ATOM   2000   CD   LYS A 323      45.055  30.177  36.799  1.00 33.76      A
     ATOM   2001   CE   LYS A 323      46.087  30.678  37.802  1.00 36.15      A
 25  ATOM   2002   NZ   LYS A 323      46.532  29.569  38.693  1.00 37.34      A
     ATOM   2003   C    LYS A 323      43.806  26.614  33.539  1.00 20.68      A
     ATOM   2004   O    LYS A 323      42.649  26.757  33.915  1.00 20.42      A
     ATOM   2005   N    ARG A 324      44.114  26.019  32.392  1.00 19.97      A
     ATOM   2006   CA   ARG A 324      43.060  25.494  31.531  1.00 17.98      A
 30  ATOM   2007   CB   ARG A 324      43.461  25.609  30.061  1.00 15.95      A
     ATOM   2008   CG   ARG A 324      43.534  27.050  29.603  1.00 17.34      A
     ATOM   2009   CD   ARG A 324      43.996  27.194  28.172  1.00 19.80      A
     ATOM   2010   NE   ARG A 324      44.438  28.565  27.944  1.00 16.93      A
     ATOM   2011   CZ   ARG A 324      45.410  28.908  27.108  1.00 19.88      A
 35  ATOM   2012   NH1  ARG A 324      46.045  27.978  26.398  1.00 14.58      A
     ATOM   2013   NH2  ARG A 324      45.774  30.181  27.015  1.00 16.51      A
     ATOM   2014   C    ARG A 324      42.762  24.046  31.883  1.00 18.32      A
     ATOM   2015   O    ARG A 324      43.673  23.222  32.006  1.00 18.20      A
     ATOM   2016   N    LEU A 325      41.479  23.748  32.055  1.00 18.32      A
 40  ATOM   2017   CA   LEU A 325      41.050  22.403  32.395  1.00 17.79      A
     ATOM   2018   CB   LEU A 325      39.523  22.335  32.425  1.00 17.03      A
     ATOM   2019   CG   LEU A 325      38.896  21.125  33.116  1.00 15.91      A
     ATOM   2020   CD1  LEU A 325      39.392  21.048  34.557  1.00 15.93      A
     ATOM   2021   CD2  LEU A 325      37.375  21.255  33.084  1.00 16.56      A
 45  ATOM   2022   C    LEU A 325      41.599  21.433  31.356  1.00 18.68      A
     ATOM   2023   O    LEU A 325      41.347  21.586  30.157  1.00 18.28      A
     ATOM   2024   N    GLY A 326      42.354  20.439  31.821  1.00 18.18      A
     ATOM   2025   CA   GLY A 326      42.931  19.462  30.915  1.00 16.36      A
     ATOM   2026   C    GLY A 326      44.443  19.558  30.807  1.00 19.15      A
 50  ATOM   2027   O    GLY A 326      45.093  18.592  30.404  1.00 19.52      A
     ATOM   2028   N    CYS A 327      45.016  20.708  31.161  1.00 18.16      A
     ATOM   2029   CA   CYS A 327      46.463  20.867  31.075  1.00 19.30      A
     ATOM   2030   CB   CYS A 327      46.856  22.350  31.058  1.00 20.22      A
     ATOM   2031   SG   CYS A 327      46.782  23.200  32.649  1.00 21.97      A
 55  ATOM   2032   C    CYS A 327      47.169  20.157  32.228  1.00 20.22      A
     ATOM   2033   O    CYS A 327      46.561  19.828  33.246  1.00 17.92      A
     ATOM   2034   N    GLU A 328      48.463  19.933  32.053  1.00 20.51      A
     ATOM   2035   CA   GLU A 328      49.274  19.244  33.042  1.00 23.34      A
     ATOM   2036   CB   GLU A 328      50.710  19.139  32.507  1.00 28.68      A
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      ATOM  2037  CG   GLU A 328    50.754  18.367  31.175  1.00 38.24      A
      ATOM  2038  CD   GLU A 328    52.067  18.500  30.414  1.00 43.23      A
      ATOM  2039  OE1  GLU A 328    52.535  19.643  30.218  1.00 46.22      A
      ATOM  2040  OE2  GLU A 328    52.618  17.459  29.991  1.00 44.90      A
   5  ATOM  2041  C    GLU A 328    49.234  19.876  34.435  1.00 22.11      A
      ATOM  2042  O    GLU A 328    49.147  19.161  35.437  1.00 20.27      A
      ATOM  2043  N    GLU A 329    49.276  21.204  34.506  1.00 18.40      A
      ATOM  2044  CA   GLU A 329    49.248  21.875  35.801  1.00 20.13      A
      ATOM  2045  CB   GLU A 329    49.587  23.363  35.657  1.00 20.36      A
  10  ATOM  2046  CG   GLU A 329    51.014  23.651  35.190  1.00 24.05      A
      ATOM  2047  CD   GLU A 329    51.191  23.518  33.688  1.00 25.93      A
      ATOM  2048  OE1  GLU A 329    50.213  23.154  32.995  1.00 26.61      A
      ATOM  2049  OE2  GLU A 329    52.311  23.781  33.198  1.00 27.19      A
      ATOM  2050  C    GLU A 329    47.890  21.718  36.480  1.00 19.36      A
  15  ATOM  2051  O    GLU A 329    47.775  21.879  37.694  1.00 18.74      A
      ATOM  2052  N    MET A 330    46.863  21.415  35.691  1.00 17.28      A
      ATOM  2053  CA   MET A 330    45.520  21.220  36.229  1.00 16.38      A
      ATOM  2054  CB   MET A 330    44.474  21.833  35.294  1.00 17.65      A
      ATOM  2055  CG   MET A 330    44.460  23.365  35.311  1.00 22.95      A
  20  ATOM  2056  SD   MET A 330    44.186  24.026  36.979  1.00 26.78      A
      ATOM  2057  CE   MET A 330    42.435  23.712  37.186  1.00 24.69      A
      ATOM  2058  C    MET A 330    45.257  19.730  36.422  1.00 14.30      A
      ATOM  2059  O    MET A 330    44.127  19.304  36.629  1.00 15.39      A
      ATOM  2060  N    GLU A 331    46.327  18.949  36.346  1.00 15.60      A
  25  ATOM  2061  CA   GLU A 331    46.289  17.501  36.531  1.00 17.08      A
      ATOM  2062  CB   GLU A 331    45.607  17.155  37.862  1.00 17.00      A
      ATOM  2063  CG   GLU A 331    46.070  18.027  39.038  1.00 17.46      A
      ATOM  2064  CD   GLU A 331    47.591  18.179  39.145  1.00 20.16      A
      ATOM  2065  OE1  GLU A 331    48.034  19.073  39.896  1.00 21.39      A
  30  ATOM  2066  OE2  GLU A 331    48.345  17.420  38.500  1.00 18.87      A
      ATOM  2067  C    GLU A 331    45.697  16.658  35.398  1.00 17.80      A
      ATOM  2068  O    GLU A 331    45.107  15.602  35.636  1.00 20.40      A
      ATOM  2069  N    GLY A 332    45.844  17.133  34.167  1.00 16.23      A
      ATOM  2070  CA   GLY A 332    45.420  16.353  33.015  1.00 14.10      A
  35  ATOM  2071  C    GLY A 332    43.982  16.154  32.596  1.00 13.54      A
      ATOM  2072  O    GLY A 332    43.063  16.864  33.017  1.00 11.96      A
      ATOM  2073  N    TYR A 333    43.804  15.141  31.750  1.00 14.37      A
      ATOM  2074  CA   TYR A 333    42.510  14.806  31.182  1.00 13.56      A
      ATOM  2075  CB   TYR A 333    42.722  13.892  29.968  1.00 15.00      A
  40  ATOM  2076  CG   TYR A 333    43.153  14.683  28.752  1.00 16.46      A
      ATOM  2077  CD1  TYR A 333    42.206  15.172  27.849  1.00 15.29      A
      ATOM  2078  CE1  TYR A 333    42.573  16.002  26.794  1.00 13.42      A
      ATOM  2079  CD2  TYR A 333    44.490  15.039  28.561  1.00 14.91      A
      ATOM  2080  CE2  TYR A 333    44.872  15.877  27.499  1.00 14.87      A
  45  ATOM  2081  CZ   TYR A 333    43.902  16.353  26.626  1.00 15.61      A
      ATOM  2082  OH   TYR A 333    44.244  17.197  25.599  1.00 17.29      A
      ATOM  2083  C    TYR A 333    41.470  14.230  32.127  1.00 15.23      A
      ATOM  2084  O    TYR A 333    40.278  14.323  31.846  1.00 16.63      A
      ATOM  2085  N    GLY A 334    41.907  13.650  33.244  1.00 15.50      A
  50  ATOM  2086  CA   GLY A 334    40.957  13.100  34.202  1.00 15.07      A
      ATOM  2087  C    GLY A 334    39.925  14.146  34.616  1.00 16.40      A
      ATOM  2088  O    GLY A 334    38.724  13.946  34.433  1.00 15.05      A
      ATOM  2089  N    PRO A 335    40.366  15.278  35.184  1.00 14.96      A
      ATOM  2090  CD   PRO A 335    41.727  15.531  35.689  1.00 15.88      A
  55  ATOM  2091  CA   PRO A 335    39.444  16.339  35.606  1.00 15.29      A
      ATOM  2092  CB   PRO A 335    40.383  17.397  36.178  1.00 13.19      A
      ATOM  2093  CG   PRO A 335    41.485  16.569  36.758  1.00 13.81      A
      ATOM  2094  C    PRO A 335    38.594  16.877  34.448  1.00 15.84      A
      ATOM  2095  O    PRO A 335    37.423  17.204  34.631  1.00 14.84      A
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	ATOM	2096	N	LEU A 336	39.184	16.971	33.257	1.00 16.12		A
	ATOM	2097	CA	LEU A 336	38.450	17.465	32.094	1.00 15.52		A
	ATOM	2098	CB	LEU A 336	39.396	17.653	30.898	1.00 14.39		A
	ATOM	2099	CG	LEU A 336	38.770	17.991	29.538	1.00 15.46		A
5	ATOM	2100	CD1	LEU A 336	37.836	19.182	29.662	1.00 11.25		A
	ATOM	2101	CD2	LEU A 336	39.884	18.285	28.528	1.00 14.11		A
	ATOM	2102	C	LEU A 336	37.321	16.508	31.714	1.00 16.28		A
	ATOM	2103	O	LEU A 336	36.176	16.921	31.540	1.00 15.51		A
	ATOM	2104	N	LYS A 337	37.640	15.225	31.592	1.00 17.22		A
10	ATOM	2105	CA	LYS A 337	36.624	14.243	31.235	1.00 17.39		A
	ATOM	2106	CB	LYS A 337	37.293	12.900	30.921	1.00 17.68		A
	ATOM	2107	CG	LYS A 337	38.170	12.994	29.676	1.00 22.31		A
	ATOM	2108	CD	LYS A 337	39.213	11.892	29.592	1.00 24.60		A
	ATOM	2109	CE	LYS A 337	38.620	10.560	29.189	1.00 24.76		A
15	ATOM	2110	NZ	LYS A 337	39.710	9.560	28.997	1.00 25.05		A
	ATOM	2111	C	LYS A 337	35.577	14.096	32.342	1.00 17.33		A
	ATOM	2112	O	LYS A 337	34.456	13.652	32.090	1.00 14.42		A
	ATOM	2113	N	ALA A 338	35.928	14.500	33.559	1.00 15.83		A
	ATOM	2114	CA	ALA A 338	34.989	14.395	34.674	1.00 17.52		A
20	ATOM	2115	CB	ALA A 338	35.744	14.167	35.980	1.00 19.68		A
	ATOM	2116	C	ALA A 338	34.095	15.621	34.804	1.00 18.83		A
	ATOM	2117	O	ALA A 338	33.252	15.687	35.695	1.00 18.94		A
	ATOM	2118	N	HIS A 339	34.262	16.596	33.918	1.00 19.42		A
	ATOM	2119	CA	HIS A 339	33.438	17.796	34.004	1.00 19.28		A
25	ATOM	2120	CB	HIS A 339	33.865	18.819	32.949	1.00 19.20		A
	ATOM	2121	CG	HIS A 339	33.163	20.134	33.074	1.00 20.26		A
	ATOM	2122	CD2	HIS A 339	33.549	21.299	33.649	1.00 18.95		A
	ATOM	2123	ND1	HIS A 339	31.880	20.340	32.612	1.00 19.10		A
	ATOM	2124	CE1	HIS A 339	31.506	21.576	32.896	1.00 22.19		A
30	ATOM	2125	NE2	HIS A 339	32.500	22.179	33.525	1.00 21.98		A
	ATOM	2126	C	HIS A 339	31.957	17.448	33.845	1.00 19.13		A
	ATOM	2127	O	HIS A 339	31.597	16.576	33.061	1.00 19.52		A
	ATOM	2128	N	PRO A 340	31.079	18.125	34.606	1.00 19.80		A
	ATOM	2129	CD	PRO A 340	31.424	19.119	35.640	1.00 19.08		A
35	ATOM	2130	CA	PRO A 340	29.630	17.900	34.569	1.00 20.52		A
	ATOM	2131	CB	PRO A 340	29.091	19.058	35.396	1.00 20.74		A
	ATOM	2132	CG	PRO A 340	30.146	19.207	36.454	1.00 19.20		A
	ATOM	2133	C	PRO A 340	29.000	17.834	33.176	1.00 21.42		A
	ATOM	2134	O	PRO A 340	28.049	17.088	32.955	1.00 22.48		A
40	ATOM	2135	N	PHE A 341	29.528	18.606	32.237	1.00 21.33		A
	ATOM	2136	CA	PHE A 341	28.985	18.610	30.886	1.00 21.57		A
	ATOM	2137	CB	PHE A 341	29.739	19.624	30.017	1.00 21.64		A
	ATOM	2138	CG	PHE A 341	29.207	19.740	28.613	1.00 23.18		A
	ATOM	2139	CD1	PHE A 341	27.903	20.171	28.382	1.00 22.58		A
45	ATOM	2140	CD2	PHE A 341	30.013	19.431	27.522	1.00 21.95		A
	ATOM	2141	CE1	PHE A 341	27.410	20.292	27.082	1.00 23.54		A
	ATOM	2142	CE2	PHE A 341	29.533	19.548	26.220	1.00 21.83		A
	ATOM	2143	CZ	PHE A 341	28.228	19.980	25.998	1.00 23.23		A
	ATOM	2144	C	PHE A 341	29.055	17.226	30.237	1.00 21.84		A
50	ATOM	2145	O	PHE A 341	28.232	16.896	29.389	1.00 20.37		A
	ATOM	2146	N	PHE A 342	30.034	16.422	30.640	1.00 20.51		A
	ATOM	2147	CA	PHE A 342	30.221	15.085	30.077	1.00 23.01		A
	ATOM	2148	CB	PHE A 342	31.710	14.809	29.850	1.00 18.00		A
	ATOM	2149	CG	PHE A 342	32.398	15.812	28.971	1.00 17.05		A
55	ATOM	2150	CD1	PHE A 342	32.010	15.987	27.652	1.00 17.78		A
	ATOM	2151	CD2	PHE A 342	33.487	16.534	29.450	1.00 15.72		A
	ATOM	2152	CE1	PHE A 342	32.702	16.867	26.811	1.00 18.08		A
	ATOM	2153	CE2	PHE A 342	34.184	17.414	28.617	1.00 17.45		A
	ATOM	2154	CZ	PHE A 342	33.790	17.578	27.298	1.00 16.56		A

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     ATOM   2155  C    PHE A 342     29.679  13.972  30.976  1.00 24.95      A
     ATOM   2156  O    PHE A 342     30.002  12.798  30.777  1.00 23.95      A
     ATOM   2157  N    GLU A 343     28.861  14.333  31.958  1.00 27.35      A
     ATOM   2158  CA   GLU A 343     28.325  13.349  32.897  1.00 30.28      A
   5 ATOM   2159  CB   GLU A 343     27.187  13.964  33.716  1.00 32.20      A
     ATOM   2160  CG   GLU A 343     26.581  12.991  34.714  1.00 39.71      A
     ATOM   2161  CD   GLU A 343     25.628  13.661  35.688  1.00 44.72      A
     ATOM   2162  OE1  GLU A 343     24.661  14.314  35.234  1.00 47.55      A
     ATOM   2163  OE2  GLU A 343     25.847  13.526  36.911  1.00 46.89      A
  10 ATOM   2164  C    GLU A 343     27.852  12.017  32.305  1.00 28.98      A
     ATOM   2165  O    GLU A 343     28.225  10.952  32.800  1.00 31.73      A
     ATOM   2166  N    SER A 344     27.037  12.067  31.258  1.00 26.09      A
     ATOM   2167  CA   SER A 344     26.520  10.838  30.656  1.00 28.36      A
     ATOM   2168  CB   SER A 344     25.129  11.089  30.067  1.00 28.73      A
  15 ATOM   2169  OG   SER A 344     25.203  11.942  28.940  1.00 30.91      A
     ATOM   2170  C    SER A 344     27.407  10.214  29.577  1.00 27.66      A
     ATOM   2171  O    SER A 344     26.987   9.281  28.900  1.00 28.66      A
     ATOM   2172  N    VAL A 345     28.627  10.715  29.419  1.00 26.75      A
     ATOM   2173  CA   VAL A 345     29.534  10.183  28.402  1.00 23.44      A
  20 ATOM   2174  CB   VAL A 345     30.565  11.256  27.950  1.00 23.10      A
     ATOM   2175  CG1  VAL A 345     31.589  10.631  26.995  1.00 22.24      A
     ATOM   2176  CG2  VAL A 345     29.854  12.418  27.275  1.00 20.05      A
     ATOM   2177  C    VAL A 345     30.326   8.957  28.855  1.00 24.26      A
     ATOM   2178  O    VAL A 345     30.876   8.930  29.960  1.00 22.83      A
  25 ATOM   2179  N    THR A 346     30.374   7.942  27.997  1.00 21.77      A
     ATOM   2180  CA   THR A 346     31.153   6.740  28.272  1.00 23.70      A
     ATOM   2181  CB   THR A 346     30.391   5.455  27.857  1.00 26.53      A
     ATOM   2182  OG1  THR A 346     29.248   5.284  28.706  1.00 29.98      A
     ATOM   2183  CG2  THR A 346     31.289   4.231  27.990  1.00 24.28      A
  30 ATOM   2184  C    THR A 346     32.383   6.945  27.385  1.00 23.43      A
     ATOM   2185  O    THR A 346     32.306   6.827  26.160  1.00 24.50      A
     ATOM   2186  N    TRP A 347     33.508   7.270  28.013  1.00 22.98      A
     ATOM   2187  CA   TRP A 347     34.744   7.569  27.300  1.00 23.81      A
     ATOM   2188  CB   TRP A 347     35.683   8.352  28.219  1.00 22.54      A
  35 ATOM   2189  CG   TRP A 347     35.128   9.658  28.693  1.00 20.61      A
     ATOM   2190  CD2  TRP A 347     35.257  10.927  28.040  1.00 19.11      A
     ATOM   2191  CE2  TRP A 347     34.581  11.881  28.838  1.00 18.39      A
     ATOM   2192  CE3  TRP A 347     35.878  11.351  26.858  1.00 18.16      A
     ATOM   2193  CD1  TRP A 347     34.397   9.883  29.828  1.00 18.35      A
  40 ATOM   2194  NE1  TRP A 347     34.065  11.218  29.923  1.00 19.51      A
     ATOM   2195  CZ2  TRP A 347     34.510  13.234  28.491  1.00 16.88      A
     ATOM   2196  CZ3  TRP A 347     35.808  12.701  26.511  1.00 17.23      A
     ATOM   2197  CH2  TRP A 347     35.127  13.624  27.327  1.00 18.16      A
     ATOM   2198  C    TRP A 347     35.538   6.429  26.675  1.00 25.79      A
  45 ATOM   2199  O    TRP A 347     36.304   6.654  25.742  1.00 24.67      A
     ATOM   2200  N    ALA A 348     35.360   5.215  27.183  1.00 27.10      A
     ATOM   2201  CA   ALA A 348     36.116   4.063  26.697  1.00 27.46      A
     ATOM   2202  CB   ALA A 348     35.899   2.869  27.636  1.00 27.09      A
     ATOM   2203  C    ALA A 348     35.895   3.620  25.256  1.00 27.18      A
  50 ATOM   2204  O    ALA A 348     36.830   3.148  24.613  1.00 29.41      A
     ATOM   2205  N    ASN A 349     34.682   3.769  24.735  1.00 26.55      A
     ATOM   2206  CA   ASN A 349     34.418   3.310  23.375  1.00 27.28      A
     ATOM   2207  CB   ASN A 349     33.700   1.962  23.444  1.00 29.37      A
     ATOM   2208  CG   ASN A 349     32.299   2.088  24.013  1.00 30.92      A
  55 ATOM   2209  OD1  ASN A 349     32.045   2.942  24.859  1.00 30.17      A
     ATOM   2210  ND2  ASN A 349     31.386   1.237  23.553  1.00 33.52      A
     ATOM   2211  C    ASN A 349     33.599   4.265  22.509  1.00 26.47      A
     ATOM   2212  O    ASN A 349     32.669   3.843  21.819  1.00 25.87      A
     ATOM   2213  N    LEU A 350     33.947   5.543  22.518  1.00 24.45      A
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	ATOM	2214	CA	LEU A 350	33.203	6.510	21.721	1.00 23.14	A
	ATOM	2215	CB	LEU A 350	33.837	7.898	21.848	1.00 23.22	A
	ATOM	2216	CG	LEU A 350	33.659	8.605	23.191	1.00 21.05	A
	ATOM	2217	CD1	LEU A 350	34.646	9.756	23.293	1.00 19.36	A
5	ATOM	2218	CD2	LEU A 350	32.220	9.094	23.319	1.00 18.78	A
	ATOM	2219	C	LEU A 350	33.082	6.152	20.240	1.00 22.60	A
	ATOM	2220	O	LEU A 350	32.011	6.296	19.650	1.00 21.15	A
	ATOM	2221	N	HIS A 351	34.165	5.689	19.627	1.00 23.13	A
	ATOM	2222	CA	HIS A 351	34.089	5.387	18.204	1.00 27.83	A
10	ATOM	2223	CB	HIS A 351	35.506	5.325	17.596	1.00 29.36	A
	ATOM	2224	CG	HIS A 351	36.082	3.950	17.493	1.00 32.07	A
	ATOM	2225	CD2	HIS A 351	36.611	3.128	18.431	1.00 32.39	A
	ATOM	2226	ND1	HIS A 351	36.197	3.285	16.291	1.00 33.02	A
	ATOM	2227	CE1	HIS A 351	36.775	2.113	16.493	1.00 33.58	A
15	ATOM	2228	NE2	HIS A 351	37.036	1.992	17.782	1.00 31.76	A
	ATOM	2229	C	HIS A 351	33.258	4.144	17.874	1.00 28.12	A
	ATOM	2230	O	HIS A 351	33.015	3.847	16.707	1.00 29.49	A
	ATOM	2231	N	GLN A 352	32.800	3.442	18.908	1.00 29.28	A
	ATOM	2232	CA	GLN A 352	31.963	2.255	18.726	1.00 29.67	A
20	ATOM	2233	CB	GLN A 352	32.366	1.145	19.694	1.00 30.56	A
	ATOM	2234	CG	GLN A 352	33.169	0.041	19.041	1.00 30.88	A
	ATOM	2235	CD	GLN A 352	34.493	-0.186	19.729	1.00 31.21	A
	ATOM	2236	OE1	GLN A 352	34.541	-0.450	20.928	1.00 30.76	A
	ATOM	2237	NE2	GLN A 352	35.578	-0.084	18.971	1.00 32.30	A
25	ATOM	2238	C	GLN A 352	30.504	2.638	18.963	1.00 30.42	A
	ATOM	2239	O	GLN A 352	29.595	1.831	18.770	1.00 29.01	A
	ATOM	2240	N	GLN A 353	30.290	3.875	19.397	1.00 27.64	A
	ATOM	2241	CA	GLN A 353	28.948	4.365	19.652	1.00 27.42	A
	ATOM	2242	CB	GLN A 353	28.977	5.401	20.775	1.00 25.77	A
30	ATOM	2243	CG	GLN A 353	29.408	4.837	22.115	1.00 27.34	A
	ATOM	2244	CD	GLN A 353	29.638	5.914	23.156	1.00 27.19	A
	ATOM	2245	OE1	GLN A 353	28.875	6.872	23.252	1.00 28.29	A
	ATOM	2246	NE2	GLN A 353	30.687	5.753	23.951	1.00 28.79	A
	ATOM	2247	C	GLN A 353	28.375	4.989	18.385	1.00 29.00	A
35	ATOM	2248	O	GLN A 353	29.118	5.455	17.516	1.00 29.14	A
	ATOM	2249	N	THR A 354	27.053	4.984	18.276	1.00 27.31	A
	ATOM	2250	CA	THR A 354	26.390	5.568	17.119	1.00 27.85	A
	ATOM	2251	CB	THR A 354	24.991	4.941	16.904	1.00 30.69	A
	ATOM	2252	OG1	THR A 354	25.132	3.532	16.665	1.00 30.07	A
40	ATOM	2253	CG2	THR A 354	24.289	5.585	15.709	1.00 29.58	A
	ATOM	2254	C	THR A 354	26.244	7.062	17.376	1.00 26.85	A
	ATOM	2255	O	THR A 354	25.592	7.475	18.329	1.00 25.77	A
	ATOM	2256	N	PRO A 355	26.867	7.898	16.533	1.00 27.22	A
	ATOM	2257	CD	PRO A 355	27.792	7.588	15.431	1.00 25.89	A
45	ATOM	2258	CA	PRO A 355	26.763	9.346	16.734	1.00 27.23	A
	ATOM	2259	CB	PRO A 355	27.625	9.915	15.609	1.00 24.91	A
	ATOM	2260	CG	PRO A 355	28.643	8.838	15.385	1.00 25.54	A
	ATOM	2261	C	PRO A 355	25.322	9.837	16.641	1.00 28.07	A
	ATOM	2262	O	PRO A 355	24.548	9.364	15.810	1.00 27.24	A
50	ATOM	2263	N	PRO A 356	24.941	10.792	17.500	1.00 28.28	A
	ATOM	2264	CD	PRO A 356	25.752	11.560	18.462	1.00 28.31	A
	ATOM	2265	CA	PRO A 356	23.572	11.306	17.448	1.00 28.44	A
	ATOM	2266	CB	PRO A 356	23.539	12.301	18.604	1.00 28.11	A
	ATOM	2267	CG	PRO A 356	24.946	12.832	18.612	1.00 26.86	A
55	ATOM	2268	C	PRO A 356	23.363	11.978	16.097	1.00 29.25	A
	ATOM	2269	O	PRO A 356	24.304	12.537	15.529	1.00 27.27	A
	ATOM	2270	N	ALA A 357	22.143	11.910	15.575	1.00 30.45	A
	ATOM	2271	CA	ALA A 357	21.848	12.521	14.287	1.00 32.81	A
	ATOM	2272	CB	ALA A 357	20.507	12.019	13.757	1.00 31.99	A

ATOM	2273	C	ALA A 357	21.824	14.035	14.448	1.00	35.05	A
ATOM	2274	O	ALA A 357	21.194	14.561	15.369	1.00	35.04	A
ATOM	2275	N	LEU A 358	22.516	14.730	13.552	1.00	37.81	A
ATOM	2276	CA	LEU A 358	22.578	16.185	13.597	1.00	42.15	A
ATOM	2277	CB	LEU A 358	23.679	16.681	12.658	1.00	39.54	A
ATOM	2278	CG	LEU A 358	25.086	16.285	13.109	1.00	39.51	A
ATOM	2279	CD1	LEU A 358	26.102	16.686	12.062	1.00	39.29	A
ATOM	2280	CD2	LEU A 358	25.395	16.953	14.445	1.00	40.01	A
ATOM	2281	C	LEU A 358	21.241	16.837	13.242	1.00	45.91	A
ATOM	2282	O	LEU A 358	20.874	16.927	12.069	1.00	45.71	A
ATOM	2283	N	THR A 359	20.530	17.290	14.275	1.00	50.06	A
ATOM	2284	CA	THR A 359	19.223	17.939	14.140	1.00	53.73	A
ATOM	2285	CB	THR A 359	19.353	19.428	13.726	1.00	54.04	A
ATOM	2286	OG1	THR A 359	19.995	19.521	12.448	1.00	56.35	A
ATOM	2287	CG2	THR A 359	20.158	20.204	14.763	1.00	54.32	A
ATOM	2288	C	THR A 359	18.309	17.236	13.139	1.00	54.47	A
ATOM	2289	O	THR A 359	18.483	16.016	12.930	1.00	55.90	A
ATOM	2290	OXT	THR A 359	17.407	17.908	12.595	1.00	56.59	A
ATOM	2291	OH2	TIP S 1	42.566	19.118	34.302	1.00	15.09	S
ATOM	2292	OH2	TIP S 2	41.052	32.378	19.857	1.00	15.82	S
ATOM	2293	OH2	TIP S 3	37.014	33.030	17.747	1.00	16.95	S
ATOM	2294	OH2	TIP S 5	45.353	24.370	18.152	1.00	16.85	S
ATOM	2295	OH2	TIP S 6	31.896	13.930	33.235	1.00	20.42	S
ATOM	2296	OH2	TIP S 7	50.351	22.781	28.249	1.00	21.14	S
ATOM	2297	OH2	TIP S 8	45.246	-0.589	-0.734	1.00	17.74	S
ATOM	2298	OH2	TIP S 11	46.249	-0.348	-8.523	1.00	21.32	S
ATOM	2299	OH2	TIP S 14	45.756	11.148	29.680	1.00	21.94	S
ATOM	2300	OH2	TIP S 15	44.273	13.157	34.592	1.00	15.61	S
ATOM	2301	OH2	TIP S 17	53.598	3.722	-1.720	1.00	21.45	S
ATOM	2302	OH2	TIP S 18	46.049	13.087	31.565	1.00	20.35	S
ATOM	2303	OH2	TIP S 19	53.422	22.401	-3.280	1.00	23.26	S
ATOM	2304	OH2	TIP S 20	34.587	7.922	5.383	1.00	22.58	S
ATOM	2305	OH2	TIP S 21	45.053	27.379	19.376	1.00	29.60	S
ATOM	2306	OH2	TIP S 23	28.899	36.416	28.633	1.00	31.68	S
ATOM	2307	OH2	TIP S 24	35.531	11.645	-8.219	1.00	23.45	S
ATOM	2308	OH2	TIP S 25	47.364	28.787	19.612	1.00	23.03	S
ATOM	2309	OH2	TIP S 27	48.859	21.588	12.634	1.00	23.76	S
ATOM	2310	OH2	TIP S 29	48.805	8.920	23.626	1.00	22.23	S
ATOM	2311	OH2	TIP S 31	48.619	7.247	10.112	1.00	21.32	S
ATOM	2312	OH2	TIP S 34	44.824	28.720	15.621	1.00	25.27	S
ATOM	2313	OH2	TIP S 35	26.030	12.634	13.407	1.00	21.61	S
ATOM	2314	OH2	TIP S 36	50.462	19.810	40.066	1.00	25.45	S
ATOM	2315	OH2	TIP S 37	39.631	23.510	-0.239	1.00	30.88	S
ATOM	2316	OH2	TIP S 40	44.734	42.655	10.346	1.00	30.84	S
ATOM	2317	OH2	TIP S 41	54.653	3.902	1.503	1.00	27.14	S
ATOM	2318	OH2	TIP S 45	45.693	21.923	39.754	1.00	28.30	S
ATOM	2319	OH2	TIP S 47	47.820	16.413	7.805	1.00	25.73	S
ATOM	2320	OH2	TIP S 48	50.292	31.412	29.642	1.00	32.79	S
ATOM	2321	OH2	TIP S 49	26.056	16.646	34.827	1.00	29.80	S
ATOM	2322	OH2	TIP S 52	31.714	10.996	31.855	1.00	29.15	S
ATOM	2323	OH2	TIP S 53	46.108	23.843	-4.299	1.00	24.21	S
ATOM	2324	OH2	TIP S 54	37.645	11.206	34.448	1.00	28.56	S
ATOM	2325	OH2	TIP S 55	26.371	28.513	12.142	1.00	32.08	S
ATOM	2326	OH2	TIP S 58	33.564	19.700	3.483	1.00	28.28	S
ATOM	2327	OH2	TIP S 64	48.295	-0.632	14.280	1.00	32.13	S
ATOM	2328	OH2	TIP S 65	40.064	26.036	34.324	1.00	24.17	S
ATOM	2329	OH2	TIP S 66	29.570	3.958	14.729	1.00	28.94	S
ATOM	2330	OH2	TIP S 72	60.085	11.604	6.814	1.00	38.35	S
ATOM	2331	OH2	TIP S 73	39.203	44.403	18.686	1.00	26.61	S

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      ATOM   2332   OH2 TIP S   76      47.312  12.366  27.366  1.00 28.51       S
      ATOM   2333   OH2 TIP S   80      43.862  33.771  33.329  1.00 28.82       S
      ATOM   2334   OH2 TIP S   81      57.890  13.106   2.128  1.00 40.62       S
      ATOM   2335   OH2 TIP S   82      41.663  34.381  32.043  1.00 19.35       S
   5  ATOM   2336   OH2 TIP S   85      50.974  40.331  19.200  1.00 21.14       S
      ATOM   2337   OH2 TIP S   88      47.925  -0.832  -6.556  1.00 24.11       S
      ATOM   2338   OH2 TIP S   90      27.231  28.336  33.481  1.00 27.64       S
      ATOM   2339   OH2 TIP S   91      43.651  -7.101  -7.995  1.00 24.33       S
      ATOM   2340   OH2 TIP S   92      49.325   4.387  19.370  1.00 28.02       S
  10  ATOM   2341   OH2 TIP S   93      46.231  11.549  33.898  1.00 29.40       S
      ATOM   2342   OH2 TIP S   94      63.889  24.831   1.168  1.00 26.53       S
      ATOM   2343   OH2 TIP S   96      56.396   4.952  -6.749  1.00 28.00       S
      ATOM   2344   OH2 TIP S   98      35.510  27.986  11.558  1.00 29.24       S
  15  ATOM   2345   OH2 TIP S  100      49.942  24.366  30.265  1.00 31.61       S
      ATOM   2346   OH2 TIP S  101      56.121   7.113  -8.298  1.00 31.57       S
      ATOM   2347   OH2 TIP S  102      58.318  19.957  -8.378  1.00 26.95       S
      ATOM   2348   OH2 TIP S  103      49.647  22.446  39.624  1.00 40.57       S
      ATOM   2349   OH2 TIP S  104      45.359   7.052  13.052  1.00 26.27       S
  20  ATOM   2350   OH2 TIP S  105      37.150  32.340  32.346  1.00 34.45       S
      ATOM   2351   OH2 TIP S  107      43.465  40.457   8.240  1.00 40.48       S
      ATOM   2352   OH2 TIP S  119      36.644   8.257  13.418  1.00 30.70       S
      ATOM   2353   OH2 TIP S  123      41.912  -8.974  -8.264  1.00 26.08       S
      ATOM   2354   OH2 TIP S  124      62.424  15.800  -7.411  1.00 24.08       S
  25  ATOM   2355   OH2 TIP S  126      37.266  18.656  -9.097  1.00 28.99       S
      ATOM   2356   OH2 TIP S  127      43.129  26.845  14.606  1.00 25.19       S
      ATOM   2357   OH2 TIP S  128      36.339  32.639  29.802  1.00 29.25       S
      ATOM   2358   OH2 TIP S  130      54.051  14.561  26.498  1.00 33.93       S
      ATOM   2359   OH2 TIP S  131      41.805  -4.242   5.492  1.00 33.72       S
  30  ATOM   2360   OH2 TIP S  133      38.873  25.163  36.697  1.00 30.69       S
      ATOM   2361   OH2 TIP S  134      28.777   8.553  25.307  1.00 31.43       S
      ATOM   2362   OH2 TIP S  135      53.672  10.546 -12.803  1.00 33.45       S
      ATOM   2363   OH2 TIP S  136      59.892  15.434  11.467  1.00 31.39       S
      ATOM   2364   OH2 TIP S  137      31.040  12.361  35.470  1.00 34.07       S
  35  ATOM   2365   OH2 TIP S  139      33.489  14.292  -0.598  1.00 40.68       S
      ATOM   2366   OH2 TIP S  140      46.918   8.748  11.662  1.00 29.23       S
      ATOM   2367   OH2 TIP S  141      46.297  -7.287  -9.196  1.00 42.20       S
      ATOM   2368   OH2 TIP S  142      58.193   6.715  -4.685  1.00 35.48       S
      ATOM   2369   OH2 TIP S  143      44.598   4.435  12.503  1.00 27.68       S
  40  ATOM   2370   OH2 TIP S  144      27.003   5.999  12.450  1.00 36.30       S
      ATOM   2371   OH2 TIP S  145      43.676  32.852  35.735  1.00 35.70       S
      ATOM   2372   OH2 TIP S  146      35.783  18.628  36.452  1.00 34.62       S
      ATOM   2373   OH2 TIP S  147      25.402   4.058  20.638  1.00 45.03       S
      ATOM   2374   OH2 TIP S  148      45.839  35.853  33.724  1.00 35.47       S
  45  ATOM   2375   OH2 TIP S  149      22.176  18.976  16.752  1.00 31.87       S
      ATOM   2376   OH2 TIP S  150      43.986  33.179  10.162  1.00 37.70       S
      ATOM   2377   OH2 TIP S  151      50.653  20.347  42.428  1.00 35.80       S
      ATOM   2378   OH2 TIP S  152      47.843  24.314   9.506  1.00 31.05       S
      ATOM   2379   OH2 TIP S  153      44.693   5.273 -14.175  1.00 29.90       S
  50  ATOM   2380   OH2 TIP S  155      26.560  36.851  31.684  1.00 49.29       S
      ATOM   2381   OH2 TIP S  156      46.867   8.019 -12.951  1.00 29.21       S
      ATOM   2382   OH2 TIP S  157      30.432  28.741  12.438  1.00 37.76       S
      ATOM   2383   OH2 TIP S  158      41.004  20.553   6.423  1.00 39.53       S
      ATOM   2384   OH2 TIP S  159      49.258  20.069  29.294  1.00 33.97       S
      ATOM   2385   OH2 TIP S  160      48.082  28.459  16.489  1.00 33.10       S
  55  ATOM   2386   OH2 TIP S  161      47.448  18.625  27.683  1.00 34.87       S
      ATOM   2387   OH2 TIP S  162      19.687  20.632  23.411  1.00 35.01       S
      ATOM   2388   OH2 TIP S  163      32.402  -1.266  22.443  1.00 37.26       S
      ATOM   2389   OH2 TIP S  164      39.475  33.468  33.237  1.00 35.34       S
      ATOM   2390   OH2 TIP S  165      44.277  18.950   5.162  1.00 45.14       S
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      ATOM   2391  OH2 TIP S 166      34.797  30.523  10.736  1.00 47.55      S
      ATOM   2392  OH2 TIP S 167      46.541   3.526 -14.949  1.00 26.54      S
      ATOM   2393  OH2 TIP S 168      36.333  16.371   1.539  1.00 38.68      S
      ATOM   2394  OH2 TIP S 169      46.761  38.936  27.403  1.00 34.66      S
   5  ATOM   2395  OH2 TIP S 170      24.163  13.264  11.375  1.00 41.23      S
      ATOM   2396  OH2 TIP S 171      48.459  15.018  31.951  1.00 38.11      S
      ATOM   2397  OH2 TIP S 172      34.261  23.193  40.004  1.00 48.96      S
      ATOM   2398  OH2 TIP S 173      45.924  -0.026  13.224  1.00 39.55      S
      ATOM   2399  OH2 TIP S 175      41.384  37.389  32.543  1.00 40.74      S
  10  ATOM   2400  OH2 TIP S 177      49.394  35.312  27.150  1.00 44.33      S
      ATOM   2401  OH2 TIP S 178      29.066  29.942  34.359  1.00 41.46      S
      ATOM   2402  OH2 TIP S 180      49.354  19.467   7.273  1.00 34.56      S
      ATOM   2403  OH2 TIP S 181      25.298  17.029  31.863  1.00 47.74      S
      ATOM   2404  OH2 TIP S 182      37.071  25.027   4.669  1.00 43.87      S
  15  ATOM   2405  OH2 TIP S 183      22.581   7.487  18.691  1.00 41.75      S
      ATOM   2406  OH2 TIP S 184      32.269   7.011  -1.891  1.00 48.84      S
      ATOM   2407  OH2 TIP S 185      48.234   0.494   6.833  1.00 48.16      S
      ATOM   2408  OH2 TIP S 187      20.008  14.658  19.211  1.00 45.27      S
      ATOM   2409  OH2 TIP S 188      49.341  22.698  42.272  1.00 42.20      S
  20  ATOM   2410  OH2 TIP S 190      61.292  18.260  -8.097  1.00 45.21      S
      ATOM   2411  OH2 TIP S 191      28.152  10.606   2.819  1.00 40.38      S
      ATOM   2412  OH2 TIP S 192      25.626  12.619  23.191  1.00 34.27      S
      ATOM   2413  OH2 TIP S 193      59.876  11.603   1.216  1.00 46.54      S
      ATOM   2414  OH2 TIP S 194      57.592  21.183 -10.646  1.00 45.82      S
  25  ATOM   2415  OH2 TIP S 195      31.509  36.649  21.499  1.00 38.73      S
      ATOM   2416  OH2 TIP S 197      50.270  -1.543  -6.136  1.00 42.66      S
      ATOM   2417  OH2 TIP S 198      24.467   8.729  13.088  1.00 42.78      S
      ATOM   2418  OH2 TIP S 199      38.098   8.699  25.759  1.00 32.80      S
      ATOM   2419  OH2 TIP S 200      57.831  11.358 -13.255  1.00 45.31      S
  30  ATOM   2420  OH2 TIP S 201      23.888  22.328  30.524  1.00 37.12      S
      ATOM   2421  OH2 TIP S 202      47.691  26.068  37.666  1.00 37.92      S
      ATOM   2422  OH2 TIP S 203      38.653   7.070  29.307  1.00 50.54      S
      ATOM   2423  OH2 TIP S 206      44.424  27.583   2.092  1.00 53.50      S
      ATOM   2424  OH2 TIP S 212      22.258   2.296  17.948  1.00 47.38      S
  35  ATOM   2425  OH2 TIP S 214      19.843  17.943  23.303  1.00 30.36      S
      ATOM   2426  OH2 TIP S 216      27.647  11.344  24.681  1.00 31.32      S
      ATOM   2427  OH2 TIP S 217      37.953   7.817  -9.284  1.00 45.97      S
      ATOM   2428  OH2 TIP S 218      33.845  34.040  12.124  1.00 38.11      S
      ATOM   2429  OH2 TIP S 219      58.484  15.269  13.717  1.00 38.26      S
  40  ATOM   2430  OH2 TIP S 220      48.526  40.920  26.583  1.00 35.23      S
      ATOM   2431  OH2 TIP S 222      52.094  21.184  38.122  1.00 29.86      S
      ATOM   2432  OH2 TIP S 223      36.889   5.881   3.281  1.00 37.63      S
      ATOM   2433  OH2 TIP S 224      47.642  -1.401 -10.684  1.00 34.89      S
      ATOM   2434  OH2 TIP S 226      47.284   2.916  19.133  1.00 34.10      S
  45  ATOM   2435  OH2 TIP S 227      42.468   4.463 -15.039  1.00 37.98      S
      ATOM   2436  OH2 TIP S 228      19.169  22.832  21.831  1.00 41.57      S
      ATOM   2437  OH2 TIP S 231      57.592  12.689  14.880  1.00 50.22      S
      ATOM   2438  OH2 TIP S 232      27.102   9.176   5.655  1.00 40.57      S
      ATOM   2439  OH2 TIP S 233      58.618   9.072 -11.925  1.00 50.71      S
  50  ATOM   2440  OH2 TIP S 234      22.822  25.342  19.945  1.00 34.93      S
      ATOM   2441  OH2 TIP S 236      24.831  32.218  28.901  1.00 37.69      S
      ATOM   2442  OH2 TIP S 237      20.045  10.774  16.992  1.00 39.57      S
      ATOM   2443  OH2 TIP S 238      58.019  19.850  15.679  1.00 41.42      S
      ATOM   2444  OH2 TIP S 239      19.490  20.949  26.114  1.00 34.55      S
  55  ATOM   2445  OH2 TIP S 240      61.187  26.377   7.346  1.00 39.68      S
      ATOM   2446  OH2 TIP S 241      33.680  38.342  19.389  1.00 48.93      S
      ATOM   2447  OH2 TIP S 242      51.539  31.612  10.881  1.00 55.65      S
      ATOM   2448  OH2 TIP S 244      25.872  14.431  30.404  1.00 46.69      S
      ATOM   2449  OH2 TIP S 248      37.332   5.849   9.544  1.00 43.81      S
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     ATOM   2450   OH2 TIP S 250     39.087   -1.293   -9.655  1.00 42.96      S
     ATOM   2451   OH2 TIP S 258     23.938   30.000   30.010  1.00 38.89      S
     ATOM   2452   OH2 TIP S 259     24.949   29.749   32.578  1.00 40.17      S
     ATOM   2453   OH2 TIP S 260     32.111   17.986    1.918  1.00 48.36      S
  5  ATOM   2454   OH2 TIP S 266     21.404   12.876   25.603  1.00 57.17      S
     ATOM   2455   OH2 TIP S 269     35.425   36.767   12.550  1.00 30.70      S
     ATOM   2456   OH2 TIP S 270     52.438   25.529   30.131  1.00 44.85      S
     ATOM   2457   OH2 TIP S 271     53.299   20.156   36.003  1.00 37.15      S
     ATOM   2458   OH2 TIP S 272     50.914    6.919   23.723  1.00 43.29      S
 10  ATOM   2459   OH2 TIP S 274     31.578   30.795   11.014  1.00 50.15      S
     ATOM   2460   OH2 TIP S 275     26.341    7.243   22.447  1.00 39.40      S
     ATOM   2461   OH2 TIP S 276     60.392   18.195   10.235  1.00 37.91      S
     ATOM   2462   OH2 TIP S 277     47.355   -9.081  -10.821  1.00 48.18      S
     ATOM   2463   OH2 TIP S 279     41.304    6.175  -16.647  1.00 38.12      S
 15  ATOM   2464   OH2 TIP S 282     33.299   21.620   37.881  1.00 46.29      S
     ATOM   2465   OH2 TIP S 283     56.469   26.112   -8.575  1.00 43.71      S
     ATOM   2466   OH2 TIP S 287     48.382   26.573    7.246  1.00 41.43      S
     ATOM   2467   OH2 TIP S 288     56.240    7.245  -11.331  1.00 41.79      S
     ATOM   2468   OH2 TIP S 290     49.060   14.978   28.166  1.00 37.03      S
 20  ATOM   2469   OH2 TIP S 291     37.095   44.270   26.442  1.00 45.08      S
     ATOM   2470   OH2 TIP S 292     47.814   -0.384  -13.299  1.00 48.60      S
     ATOM   2471   OH2 TIP S 297     58.081    2.784   -7.841  1.00 41.89      S
     ATOM   2472   OH2 TIP S 298     36.447   45.321   18.644  1.00 54.91      S
     ATOM   2473   OH2 TIP S 299     49.029   23.328    1.767  1.00 30.55      S
 25  ATOM   2474   OH2 TIP S 301     24.375   13.771    8.634  1.00 48.47      S
     ATOM   2475   OH2 TIP S 303     47.904   36.798   28.653  1.00 35.76      S
     ATOM   2476   OH2 TIP S 305     51.156   40.821   27.172  1.00 43.59      S
     ATOM   2477   OH2 TIP S 306     32.943   28.917   35.227  1.00 42.60      S
     ATOM   2478   OH2 TIP S 307     58.462   28.373    6.251  1.00 46.15      S
 30  ATOM   2479   OH2 TIP S 308     41.964   30.940   36.712  1.00 48.26      S
     ATOM   2480   OH2 TIP S 313     51.176   -1.922   -3.336  1.00 50.61      S
     ATOM   2481   OH2 TIP S1001     21.319   36.868   23.805  1.00 36.97      S
     ATOM   2482   OH2 TIP S1002     48.880   32.620   27.617  1.00 44.40      S
     ATOM   2483   OH2 TIP S1003     61.880   19.473   11.767  1.00 45.49      S
 35  ATOM   2484   OH2 TIP S1004     52.770   21.424   26.815  1.00 24.43      S
     ATOM   2485   OH2 TIP S1005     35.373   29.094   36.197  1.00 35.97      S
     ATOM   2486   OH2 TIP S1006     40.815   -6.636    4.389  1.00 43.15      S
     ATOM   2487   OH2 TIP S1007     44.953    1.286   11.272  1.00 49.45      S
     ATOM   2488   OH2 TIP S1010     21.004   16.168   27.009  1.00 48.51      S
 40  ATOM   2489   OH2 TIP S1011     47.094   41.786    9.243  1.00 50.10      S
     ATOM   2490   OH2 TIP S1012     32.479    2.978   14.158  1.00 49.47      S
     ATOM   2491   O12 GLC G    1    48.557   11.372  -12.279  1.00 40.72      G
     ATOM   2492   C11 GLC G    1    48.836   12.133  -11.097  1.00 38.05      G
     ATOM   2493   C13 GLC G    1    49.266   13.554  -11.476  1.00 38.09      G
 45  ATOM   2494   O14 GLC G    1    49.559   14.299  -10.292  1.00 33.99      G
     ATOM   2495   C15 GLC G    1    48.150   14.257  -12.257  1.00 37.32      G
     ATOM   2496   O16 GLC G    1    48.574   15.582  -12.604  1.00 36.74      G
     ATOM   2497   O12 GLC G    2    40.114   -6.634   -6.562  1.00 33.52      G
     ATOM   2498   C11 GLC G    2    38.967   -6.592   -7.404  1.00 31.05      G
 50  ATOM   2499   C13 GLC G    2    37.712   -6.417   -6.552  1.00 31.56      G
     ATOM   2500   O14 GLC G    2    36.554   -6.406   -7.389  1.00 30.70      G
     ATOM   2501   C15 GLC G    2    37.792   -5.109   -5.761  1.00 30.03      G
     ATOM   2502   O16 GLC G    2    36.609   -4.961   -4.975  1.00 29.66      G
     ATOM   2503   O12 GLC G    3    44.030    8.243  -13.470  1.00 37.90      G
 55  ATOM   2504   C11 GLC G    3    43.950    9.648  -13.690  1.00 38.47      G
     ATOM   2505   C13 GLC G    3    42.747    9.974  -14.579  1.00 39.52      G
     ATOM   2506   O14 GLC G    3    41.551    9.526  -13.942  1.00 39.39      G
     ATOM   2507   C15 GLC G    3    42.878    9.280  -15.934  1.00 41.43      G
     ATOM   2508   O16 GLC G    3    41.736    9.613  -16.731  1.00 40.78      G
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     ATOM   2509  O12 GLC G   5      40.556   1.005   2.289  1.00 45.25      G
     ATOM   2510  C11 GLC G   5      40.966   2.332   1.960  1.00 40.56      G
     ATOM   2511  C13 GLC G   5      40.187   3.327   2.814  1.00 40.36      G
     ATOM   2512  O14 GLC G   5      38.791   3.169   2.572  1.00 40.71      G
  5  ATOM   2513  C15 GLC G   5      40.619   4.751   2.464  1.00 40.04      G
     ATOM   2514  O16 GLC G   5      39.885   5.681   3.256  1.00 36.89      G
     ATOM   2515  O12 GLC G   6      36.951  22.702  40.046  1.00 63.04      G
     ATOM   2516  C11 GLC G   6      37.592  21.583  39.422  1.00 62.46      G
     ATOM   2517  C13 GLC G   6      38.104  21.978  38.030  1.00 61.14      G
 10  ATOM   2518  O14 GLC G   6      39.034  23.054  38.168  1.00 61.72      G
     ATOM   2519  C15 GLC G   6      36.948  22.429  37.126  1.00 60.51      G
     ATOM   2520  O16 GLC G   6      35.992  21.372  36.960  1.00 58.61      G
     ATOM   2521  O12 GLC G   7      37.316   0.281  14.299  1.00 73.45      G
     ATOM   2522  C11 GLC G   7      37.655  -0.758  15.222  1.00 72.78      G
 15  ATOM   2523  C13 GLC G   7      36.592  -1.856  15.157  1.00 72.98      G
     ATOM   2524  O14 GLC G   7      35.320  -1.299  15.498  1.00 73.88      G
     ATOM   2525  C15 GLC G   7      36.924  -2.989  16.134  1.00 73.66      G
     ATOM   2526  O16 GLC G   7      36.972  -2.493  17.478  1.00 75.38      G
     ATOM   2527  O12 GLC G   8      51.921  21.898   5.908  1.00 62.51      G
 20  ATOM   2528  C11 GLC G   8      52.447  20.871   5.063  1.00 63.42      G
     ATOM   2529  C13 GLC G   8      51.476  20.597   3.908  1.00 64.28      G
     ATOM   2530  O14 GLC G   8      51.297  21.794   3.150  1.00 66.28      G
     ATOM   2531  C15 GLC G   8      50.121  20.137   4.448  1.00 64.49      G
     ATOM   2532  O16 GLC G   8      49.233  19.886   3.357  1.00 64.01      G
 25  ATOM   2533  O12 GLC G  10      36.044  37.499  29.523  1.00 56.89      G
     ATOM   2534  C11 GLC G  10      35.164  36.645  30.259  1.00 56.97      G
     ATOM   2535  C13 GLC G  10      33.849  36.489  29.494  1.00 56.11      G
     ATOM   2536  O14 GLC G  10      33.248  37.772  29.308  1.00 56.44      G
     ATOM   2537  C15 GLC G  10      32.900  35.580  30.277  1.00 55.84      G
 30  ATOM   2538  O16 GLC G  10      31.674  35.442  29.557  1.00 55.39      G
     ATOM   2539  O3G ATP N   1      46.280  25.658   5.170  1.00 51.49      N
     ATOM   2540  PG  ATP N   1      46.464  25.053   3.691  1.00 52.22      N
     ATOM   2541  O1G ATP N   1      47.406  23.911   3.763  1.00 51.41      N
     ATOM   2542  O2G ATP N   1      46.794  26.182   2.784  1.00 52.07      N
 35  ATOM   2543  O3B ATP N   1      44.976  24.513   3.344  1.00 51.01      N
     ATOM   2544  PB  ATP N   1      44.560  22.969   3.605  1.00 50.20      N
     ATOM   2545  O1B ATP N   1      43.083  22.898   3.669  1.00 49.41      N
     ATOM   2546  O2B ATP N   1      45.345  22.474   4.766  1.00 50.34      N
     ATOM   2547  O3A ATP N   1      45.070  22.231   2.255  1.00 47.77      N
 40  ATOM   2548  PA  ATP N   1      45.075  20.613   2.121  1.00 42.84      N
     ATOM   2549  O1A ATP N   1      45.547  20.291   0.754  1.00 43.81      N
     ATOM   2550  O2A ATP N   1      45.807  20.035   3.270  1.00 45.03      N
     ATOM   2551  O5* ATP N   1      43.516  20.223   2.245  1.00 41.73      N
     ATOM   2552  C5* ATP N   1      42.528  20.925   1.489  1.00 37.57      N
 45  ATOM   2553  C4* ATP N   1      41.127  20.379   1.776  1.00 39.45      N
     ATOM   2554  O4* ATP N   1      40.907  19.024   1.279  1.00 37.72      N
     ATOM   2555  C3* ATP N   1      40.777  20.321   3.251  1.00 38.48      N
     ATOM   2556  O3* ATP N   1      40.360  21.615   3.697  1.00 40.42      N
     ATOM   2557  C2* ATP N   1      39.608  19.374   3.270  1.00 37.58      N
 50  ATOM   2558  O2* ATP N   1      38.410  20.076   2.924  1.00 35.98      N
     ATOM   2559  C1* ATP N   1      39.939  18.346   2.173  1.00 35.55      N
     ATOM   2560  N9  ATP N   1      40.628  17.156   2.747  1.00 31.76      N
     ATOM   2561  C8  ATP N   1      41.864  17.126   3.274  1.00 30.49      N
     ATOM   2562  N7  ATP N   1      42.143  15.877   3.667  1.00 29.75      N
 55  ATOM   2563  C5  ATP N   1      41.088  15.118   3.390  1.00 27.49      N
     ATOM   2564  C4  ATP N   1      40.125  15.925   2.810  1.00 30.02      N
     ATOM   2565  N3  ATP N   1      38.937  15.389   2.431  1.00 27.11      N
     ATOM   2566  C2  ATP N   1      38.679  14.085   2.615  1.00 25.62      N
     ATOM   2567  N1  ATP N   1      39.597  13.283   3.175  1.00 21.76      N
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      ATOM   2568  C6   ATP N   1     40.800  13.768   3.571  1.00 23.90        N
      ATOM   2569  N6   ATP N   1     41.698  12.964   4.127  1.00 21.94        N
      ATOM   2570  S    SO4 I   1     58.680   8.493  -0.639  1.00 56.05        I
      ATOM   2571  O1   SO4 I   1     57.956   7.875   0.483  1.00 58.83        I
    5 ATOM   2572  O2   SO4 I   1     57.886   9.607  -1.188  1.00 57.04        I
      ATOM   2573  O3   SO4 I   1     58.906   7.478  -1.683  1.00 57.47        I
      ATOM   2574  O4   SO4 I   1     59.976   9.008  -0.156  1.00 57.51        I
      ATOM   2575  S    SO4 I   2     39.339   4.855   7.057  1.00 84.24        I
      ATOM   2576  O1   SO4 I   2     39.390   6.175   7.711  1.00 85.02        I
   10 ATOM   2577  O2   SO4 I   2     40.101   4.897   5.797  1.00 84.75        I
      ATOM   2578  O3   SO4 I   2     37.936   4.506   6.766  1.00 84.94        I
      ATOM   2579  O4   SO4 I   2     39.931   3.842   7.954  1.00 84.44        I
      ATOM   2580  S    SO4 I   3     38.987  -2.256   3.310  1.00 58.58        I
      ATOM   2581  O1   SO4 I   3     37.734  -1.675   3.827  1.00 59.11        I
   15 ATOM   2582  O2   SO4 I   3     39.460  -1.454   2.172  1.00 59.91        I
      ATOM   2583  O3   SO4 I   3     38.743  -3.640   2.866  1.00 59.04        I
      ATOM   2584  O4   SO4 I   3     40.014  -2.260   4.369  1.00 59.58        I
      ATOM   2585  S    SO4 I   4     34.397   5.289  30.981  1.00 64.34        I
      ATOM   2586  O1   SO4 I   4     33.627   6.528  30.742  1.00 60.43        I
   20 ATOM   2587  O2   SO4 I   4     34.337   4.427  29.782  1.00 60.11        I
      ATOM   2588  O3   SO4 I   4     33.816   4.572  32.133  1.00 64.39        I
      ATOM   2589  O4   SO4 I   4     35.806   5.626  31.277  1.00 63.55        I
      ATOM   2590  S    SO4 I   5     55.074  -6.984  -3.711  1.00 75.40        I
      ATOM   2591  O1   SO4 I   5     54.657  -7.518  -2.399  1.00 74.86        I
   25 ATOM   2592  O2   SO4 I   5     54.209  -5.845  -4.065  1.00 74.96        I
      ATOM   2593  O3   SO4 I   5     54.950  -8.034  -4.742  1.00 74.22        I
      ATOM   2594  O4   SO4 I   5     56.477  -6.532  -3.633  1.00 75.15        I
      ATOM   2595  O2   PO4 P 100     57.362  24.998  13.149  1.00 66.76        P
      ATOM   2596  O3   PO4 P 100     59.399  26.166  13.761  1.00 66.89        P
   30 ATOM   2597  O4   PO4 P 100     57.761  25.606  15.462  1.00 67.43        P
      ATOM   2598  O1   PO4 P 100     57.264  27.325  13.818  1.00 65.91        P
      ATOM   2599  P    PO4 P 100     57.947  26.025  14.048  1.00 66.69        P
      END
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Example 4: Co-ordinates for the dimer of the PDK1 fragment, without alternate side chains. Chain A is the molecule for which co-ordinates are given in Examples 2 and 3, and chain B is the symmetry-related molecule.

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      ATOM      1  CB   PRO A  71     58.912  -7.251   8.216  1.00 67.78        A
   40 ATOM      2  CG   PRO A  71     59.621  -6.941   9.534  1.00 69.16        A
      ATOM      3  C    PRO A  71     59.493  -6.506   5.894  1.00 67.06        A
      ATOM      4  O    PRO A  71     59.196  -5.318   5.766  1.00 66.66        A
      ATOM      5  N    PRO A  71     60.984  -6.073   7.833  1.00 67.86        A
      ATOM      6  CD   PRO A  71     60.554  -5.762   9.207  1.00 68.24        A
   45 ATOM      7  CA   PRO A  71     60.040  -7.035   7.217  1.00 67.75        A
      ATOM      8  N    PRO A  72     59.356  -7.385   4.890  1.00 66.32        A
      ATOM      9  CD   PRO A  72     59.712  -8.816   4.898  1.00 67.17        A
      ATOM     10  CA   PRO A  72     58.840  -6.986   3.578  1.00 65.61        A
      ATOM     11  CB   PRO A  72     58.672  -8.321   2.858  1.00 66.47        A
   50 ATOM     12  CG   PRO A  72     59.796  -9.133   3.419  1.00 67.57        A
      ATOM     13  C    PRO A  72     57.527  -6.208   3.673  1.00 63.94        A
      ATOM     14  O    PRO A  72     56.710  -6.451   4.561  1.00 64.11        A
      ATOM     15  N    ALA A  73     57.341  -5.268   2.753  1.00 61.57        A
      ATOM     16  CA   ALA A  73     56.133  -4.454   2.708  1.00 58.74        A
   55 ATOM     17  CB   ALA A  73     56.438  -3.030   3.165  1.00 58.05        A
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	ATOM	18	C	ALA A	73	55.626	-4.448	1.271	1.00 56.78		A
	ATOM	19	O	ALA A	73	56.347	-4.834	0.349	1.00 56.95		A
	ATOM	20	N	PRO A	74	54.372	-4.024	1.057	1.00 54.15		A
	ATOM	21	CD	PRO A	74	53.335	-3.610	2.018	1.00 53.31		A
5	ATOM	22	CA	PRO A	74	53.856	-4.003	-0.314	1.00 52.54		A
	ATOM	23	CB	PRO A	74	52.474	-3.375	-0.148	1.00 52.86		A
	ATOM	24	CG	PRO A	74	52.067	-3.824	1.226	1.00 52.88		A
	ATOM	25	C	PRO A	74	54.772	-3.167	-1.204	1.00 50.08		A
	ATOM	26	O	PRO A	74	55.559	-2.361	-0.708	1.00 49.96		A
10	ATOM	27	N	ALA A	75	54.680	-3.366	-2.514	1.00 47.58		A
	ATOM	28	CA	ALA A	75	55.503	-2.602	-3.446	1.00 44.69		A
	ATOM	29	CB	ALA A	75	55.312	-3.121	-4.870	1.00 46.14		A
	ATOM	30	C	ALA A	75	55.100	-1.134	-3.371	1.00 41.55		A
	ATOM	31	O	ALA A	75	53.947	-0.813	-3.086	1.00 41.01		A
15	ATOM	32	N	LYS A	76	56.053	-0.245	-3.619	1.00 38.31		A
	ATOM	33	CA	LYS A	76	55.781	1.184	-3.588	1.00 35.72		A
	ATOM	34	CB	LYS A	76	57.053	1.957	-3.930	1.00 37.70		A
	ATOM	35	CG	LYS A	76	57.123	3.356	-3.350	1.00 40.99		A
	ATOM	36	CD	LYS A	76	57.262	3.316	-1.836	1.00 40.04		A
20	ATOM	37	CE	LYS A	76	57.511	4.705	-1.277	1.00 42.08		A
	ATOM	38	NZ	LYS A	76	57.681	4.695	0.202	1.00 42.99		A
	ATOM	39	C	LYS A	76	54.708	1.467	-4.638	1.00 32.65		A
	ATOM	40	O	LYS A	76	54.814	1.005	-5.770	1.00 31.41		A
25	ATOM	41	N	LYS A	77	53.668	2.207	-4.270	1.00 28.59		A
	ATOM	42	CA	LYS A	77	52.619	2.517	-5.232	1.00 25.72		A
	ATOM	43	CB	LYS A	77	51.316	2.865	-4.509	1.00 26.22		A
	ATOM	44	CG	LYS A	77	50.796	1.731	-3.631	1.00 27.15		A
	ATOM	45	CD	LYS A	77	49.487	2.089	-2.967	1.00 26.80		A
	ATOM	46	CE	LYS A	77	49.136	1.091	-1.870	1.00 27.31		A
30	ATOM	47	NZ	LYS A	77	48.998	-0.296	-2.380	1.00 27.17		A
	ATOM	48	C	LYS A	77	53.053	3.668	-6.137	1.00 24.67		A
	ATOM	49	O	LYS A	77	54.010	4.377	-5.829	1.00 21.60		A
	ATOM	50	N	ARG A	78	52.351	3.838	-7.254	1.00 23.66		A
35	ATOM	51	CA	ARG A	78	52.662	4.897	-8.211	1.00 26.14		A
	ATOM	52	CB	ARG A	78	53.574	4.344	-9.318	1.00 28.57		A
	ATOM	53	CG	ARG A	78	53.017	3.139	-10.050	1.00 34.78		A
	ATOM	54	CD	ARG A	78	54.092	2.465	-10.896	1.00 40.96		A
	ATOM	55	NE	ARG A	78	53.560	1.364	-11.700	1.00 48.93		A
	ATOM	56	CZ	ARG A	78	52.985	0.270	-11.203	1.00 52.58		A
40	ATOM	57	NH1	ARG A	78	52.860	0.113	-9.889	1.00 54.60		A
	ATOM	58	NH2	ARG A	78	52.530	-0.672	-12.022	1.00 54.09		A
	ATOM	59	C	ARG A	78	51.382	5.488	-8.803	1.00 23.76		A
	ATOM	60	O	ARG A	78	50.311	4.888	-8.706	1.00 24.25		A
	ATOM	61	N	PRO A	79	51.475	6.676	-9.428	1.00 21.76		A
45	ATOM	62	CD	PRO A	79	52.691	7.475	-9.668	1.00 20.82		A
	ATOM	63	CA	PRO A	79	50.301	7.325	-10.021	1.00 21.96		A
	ATOM	64	CB	PRO A	79	50.910	8.481	-10.816	1.00 22.27		A
	ATOM	65	CG	PRO A	79	52.124	8.831	-10.014	1.00 22.12		A
	ATOM	66	C	PRO A	79	49.446	6.413	-10.903	1.00 22.86		A
50	ATOM	67	O	PRO A	79	48.213	6.461	-10.842	1.00 20.52		A
	ATOM	68	N	GLU A	80	50.103	5.586	-11.714	1.00 21.87		A
	ATOM	69	CA	GLU A	80	49.403	4.685	-12.628	1.00 22.99		A
	ATOM	70	CB	GLU A	80	50.393	3.994	-13.571	1.00 25.24		A
	ATOM	71	CG	GLU A	80	51.230	2.907	-12.925	1.00 28.75		A
55	ATOM	72	CD	GLU A	80	52.157	2.224	-13.991	1.00 31.99		A
	ATOM	73	OE1	GLU A	80	53.072	2.897	-14.433	1.00 34.34		A
	ATOM	74	OE2	GLU A	80	51.969	1.015	-14.172	1.00 32.83		A
	ATOM	75	C	GLU A	80	48.556	3.631	-11.912	1.00 22.09		A
	ATOM	76	O	GLU A	80	47.692	3.013	-12.530	1.00 22.37		A

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      ATOM     77   N    ASP A  81      48.804    3.413 -10.622  1.00 19.97      A
      ATOM     78   CA   ASP A  81      48.026    2.423  -9.874  1.00 19.93      A
      ATOM     79   CB   ASP A  81      48.736    2.029  -8.571  1.00 21.19      A
      ATOM     80   CG   ASP A  81      50.089    1.380  -8.807  1.00 22.46      A
  5   ATOM     81   OD1  ASP A  81      50.195    0.554  -9.731  1.00 24.22      A
      ATOM     82   OD2  ASP A  81      51.043    1.685  -8.058  1.00 23.33      A
      ATOM     83   C    ASP A  81      46.652    2.975  -9.518  1.00 20.85      A
      ATOM     84   O    ASP A  81      45.793    2.246  -9.015  1.00 19.96      A
      ATOM     85   N    PHE A  82      46.445    4.258  -9.804  1.00 18.91      A
 10   ATOM     86   CA   PHE A  82      45.200    4.934  -9.465  1.00 19.30      A
      ATOM     87   CB   PHE A  82      45.475    6.027  -8.427  1.00 18.43      A
      ATOM     88   CG   PHE A  82      46.134    5.531  -7.175  1.00 18.01      A
      ATOM     89   CD1  PHE A  82      45.371    5.136  -6.084  1.00 17.19      A
      ATOM     90   CD2  PHE A  82      47.520    5.460  -7.086  1.00 18.99      A
 15   ATOM     91   CE1  PHE A  82      45.977    4.676  -4.918  1.00 17.12      A
      ATOM     92   CE2  PHE A  82      48.137    5.000  -5.925  1.00 19.64      A
      ATOM     93   CZ   PHE A  82      47.361    4.607  -4.838  1.00 18.00      A
      ATOM     94   C    PHE A  82      44.476    5.596 -10.621  1.00 20.81      A
      ATOM     95   O    PHE A  82      45.066    5.933 -11.649  1.00 20.34      A
 20   ATOM     96   N    LYS A  83      43.182    5.792 -10.411  1.00 19.80      A
      ATOM     97   CA   LYS A  83      42.321    6.478 -11.353  1.00 21.65      A
      ATOM     98   CB   LYS A  83      41.096    5.625 -11.687  1.00 22.02      A
      ATOM     99   CG   LYS A  83      40.062    6.326 -12.550  1.00 28.93      A
      ATOM    100   CD   LYS A  83      38.974    5.355 -12.981  1.00 34.20      A
 25   ATOM    101   CE   LYS A  83      37.909    6.042 -13.824  1.00 38.10      A
      ATOM    102   NZ   LYS A  83      37.179    7.086 -13.043  1.00 43.33      A
      ATOM    103   C    LYS A  83      41.913    7.702 -10.541  1.00 20.74      A
      ATOM    104   O    LYS A  83      41.084    7.606  -9.635  1.00 20.98      A
      ATOM    105   N    PHE A  84      42.513    8.848 -10.835  1.00 19.99      A
 30   ATOM    106   CA   PHE A  84      42.188   10.049 -10.083  1.00 18.63      A
      ATOM    107   CB   PHE A  84      43.279   11.103 -10.258  1.00 18.95      A
      ATOM    108   CG   PHE A  84      44.571   10.741  -9.587  1.00 17.68      A
      ATOM    109   CD1  PHE A  84      45.498    9.926 -10.224  1.00 18.16      A
      ATOM    110   CD2  PHE A  84      44.843   11.183  -8.299  1.00 19.66      A
 35   ATOM    111   CE1  PHE A  84      46.676    9.556  -9.589  1.00 18.09      A
      ATOM    112   CE2  PHE A  84      46.021   10.816  -7.653  1.00 18.89      A
      ATOM    113   CZ   PHE A  84      46.936   10.002  -8.301  1.00 17.33      A
      ATOM    114   C    PHE A  84      40.834   10.617 -10.460  1.00 19.69      A
      ATOM    115   O    PHE A  84      40.391   10.489 -11.601  1.00 20.72      A
 40   ATOM    116   N    GLY A  85      40.178   11.233  -9.484  1.00 16.80      A
      ATOM    117   CA   GLY A  85      38.872   11.810  -9.716  1.00 17.73      A
      ATOM    118   C    GLY A  85      38.819   13.280  -9.346  1.00 18.75      A
      ATOM    119   O    GLY A  85      39.740   14.043  -9.650  1.00 18.45      A
      ATOM    120   N    LYS A  86      37.753   13.673  -8.659  1.00 16.00      A
 45   ATOM    121   CA   LYS A  86      37.571   15.064  -8.278  1.00 18.26      A
      ATOM    122   CB   LYS A  86      36.133   15.302  -7.812  1.00 19.00      A
      ATOM    123   CG   LYS A  86      35.793   14.660  -6.481  1.00 21.55      A
      ATOM    124   CD   LYS A  86      34.368   14.981  -6.066  1.00 26.48      A
      ATOM    125   CE   LYS A  86      33.994   14.239  -4.793  1.00 31.92      A
 50   ATOM    126   NZ   LYS A  86      32.568   14.457  -4.412  1.00 35.36      A
      ATOM    127   C    LYS A  86      38.523   15.571  -7.202  1.00 18.57      A
      ATOM    128   O    LYS A  86      39.045   14.807  -6.385  1.00 16.77      A
      ATOM    129   N    ILE A  87      38.737   16.881  -7.227  1.00 17.88      A
      ATOM    130   CA   ILE A  87      39.577   17.554  -6.256  1.00 18.26      A
 55   ATOM    131   CB   ILE A  87      39.994   18.952  -6.772  1.00 19.60      A
      ATOM    132   CG2  ILE A  87      40.593   19.786  -5.628  1.00 18.73      A
      ATOM    133   CG1  ILE A  87      40.968   18.786  -7.945  1.00 21.16      A
      ATOM    134   CD1  ILE A  87      41.412   20.087  -8.588  1.00 25.26      A
      ATOM    135   C    ILE A  87      38.731   17.709  -4.997  1.00 19.67      A
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     ATOM   136  O    ILE A  87      37.628  18.249  -5.052  1.00 20.41      A
     ATOM   137  N    LEU A  88      39.240  17.229  -3.867  1.00 19.15      A
     ATOM   138  CA   LEU A  88      38.508  17.324  -2.611  1.00 20.68      A
     ATOM   139  CB   LEU A  88      38.870  16.151  -1.700  1.00 19.97      A
  5  ATOM   140  CG   LEU A  88      38.529  14.759  -2.237  1.00 19.24      A
     ATOM   141  CD1  LEU A  88      39.090  13.692  -1.311  1.00 21.41      A
     ATOM   142  CD2  LEU A  88      37.029  14.622  -2.359  1.00 18.84      A
     ATOM   143  C    LEU A  88      38.815  18.632  -1.901  1.00 23.11      A
     ATOM   144  O    LEU A  88      37.999  19.146  -1.139  1.00 25.10      A
 10  ATOM   145  N    GLY A  89      39.997  19.174  -2.149  1.00 24.09      A
     ATOM   146  CA   GLY A  89      40.367  20.418  -1.507  1.00 24.27      A
     ATOM   147  C    GLY A  89      41.658  20.954  -2.078  1.00 25.47      A
     ATOM   148  O    GLY A  89      42.445  20.202  -2.666  1.00 22.19      A
     ATOM   149  N    GLU A  90      41.870  22.254  -1.906  1.00 26.22      A
 15  ATOM   150  CA   GLU A  90      43.064  22.924  -2.404  1.00 29.96      A
     ATOM   151  CB   GLU A  90      42.698  23.814  -3.596  1.00 30.75      A
     ATOM   152  CG   GLU A  90      42.267  23.038  -4.831  1.00 34.32      A
     ATOM   153  CD   GLU A  90      41.711  23.930  -5.927  1.00 38.27      A
     ATOM   154  OE1  GLU A  90      40.590  24.456  -5.764  1.00 40.57      A
 20  ATOM   155  OE2  GLU A  90      42.398  24.110  -6.952  1.00 40.90      A
     ATOM   156  C    GLU A  90      43.711  23.768  -1.313  1.00 30.68      A
     ATOM   157  O    GLU A  90      43.049  24.574  -0.668  1.00 32.83      A
     ATOM   158  N    GLY A  91      45.006  23.566  -1.104  1.00 29.66      A
     ATOM   159  CA   GLY A  91      45.724  24.332  -0.104  1.00 29.40      A
 25  ATOM   160  C    GLY A  91      46.795  25.151  -0.798  1.00 29.98      A
     ATOM   161  O    GLY A  91      46.894  25.130  -2.028  1.00 28.16      A
     ATOM   162  N    SER A  92      47.605  25.870  -0.029  1.00 28.30      A
     ATOM   163  CA   SER A  92      48.653  26.681  -0.633  1.00 30.50      A
     ATOM   164  CB   SER A  92      49.165  27.717   0.370  1.00 32.43      A
 30  ATOM   165  OG   SER A  92      49.520  27.099   1.593  1.00 40.94      A
     ATOM   166  C    SER A  92      49.815  25.843  -1.164  1.00 29.77      A
     ATOM   167  O    SER A  92      50.456  26.221  -2.143  1.00 30.46      A
     ATOM   168  N    PHE A  93      50.087  24.703  -0.536  1.00 27.65      A
     ATOM   169  CA   PHE A  93      51.185  23.855  -0.995  1.00 26.34      A
 35  ATOM   170  CB   PHE A  93      52.281  23.785   0.068  1.00 27.95      A
     ATOM   171  CG   PHE A  93      52.861  25.117   0.406  1.00 31.06      A
     ATOM   172  CD1  PHE A  93      52.283  25.909   1.392  1.00 29.96      A
     ATOM   173  CD2  PHE A  93      53.949  25.613  -0.308  1.00 31.38      A
     ATOM   174  CE1  PHE A  93      52.779  27.181   1.665  1.00 32.69      A
 40  ATOM   175  CE2  PHE A  93      54.452  26.883  -0.044  1.00 32.63      A
     ATOM   176  CZ   PHE A  93      53.864  27.670   0.945  1.00 31.81      A
     ATOM   177  C    PHE A  93      50.759  22.445  -1.365  1.00 25.39      A
     ATOM   178  O    PHE A  93      51.601  21.559  -1.522  1.00 24.59      A
     ATOM   179  N    SER A  94      49.457  22.235  -1.519  1.00 23.63      A
 45  ATOM   180  CA   SER A  94      48.965  20.912  -1.860  1.00 21.43      A
     ATOM   181  CB   SER A  94      49.017  20.013  -0.628  1.00 21.42      A
     ATOM   182  OG   SER A  94      48.091  20.475   0.340  1.00 21.19      A
     ATOM   183  C    SER A  94      47.539  20.925  -2.378  1.00 19.82      A
     ATOM   184  O    SER A  94      46.795  21.882  -2.173  1.00 18.76      A
 50  ATOM   185  N    THR A  95      47.174  19.832  -3.038  1.00 19.38      A
     ATOM   186  CA   THR A  95      45.840  19.637  -3.580  1.00 17.98      A
     ATOM   187  CB   THR A  95      45.818  19.818  -5.110  1.00 19.25      A
     ATOM   188  OG1  THR A  95      46.196  21.162  -5.434  1.00 22.04      A
     ATOM   189  CG2  THR A  95      44.421  19.549  -5.661  1.00 17.61      A
 55  ATOM   190  C    THR A  95      45.455  18.201  -3.243  1.00 18.61      A
     ATOM   191  O    THR A  95      46.212  17.264  -3.524  1.00 17.10      A
     ATOM   192  N    VAL A  96      44.295  18.024  -2.623  1.00 16.53      A
     ATOM   193  CA   VAL A  96      43.845  16.685  -2.266  1.00 16.05      A
     ATOM   194  CB   VAL A  96      43.170  16.672  -0.886  1.00 16.32      A
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ATOM	195	CG1	VAL A	96	42.741	15.249	-0.532	1.00	18.02	A
ATOM	196	CG2	VAL A	96	44.145	17.206	0.168	1.00	16.69	A
ATOM	197	C	VAL A	96	42.875	16.207	-3.335	1.00	16.42	A
ATOM	198	O	VAL A	96	41.906	16.892	-3.665	1.00	16.47	A
ATOM	199	N	VAL A	97	43.157	15.033	-3.888	1.00	16.80	A
ATOM	200	CA	VAL A	97	42.338	14.471	-4.949	1.00	16.72	A
ATOM	201	CB	VAL A	97	43.153	14.354	-6.255	1.00	18.43	A
ATOM	202	CG1	VAL A	97	42.249	13.927	-7.404	1.00	19.69	A
ATOM	203	CG2	VAL A	97	43.831	15.685	-6.569	1.00	17.84	A
ATOM	204	C	VAL A	97	41.812	13.091	-4.583	1.00	16.77	A
ATOM	205	O	VAL A	97	42.532	12.270	-4.014	1.00	17.13	A
ATOM	206	N	LEU A	98	40.545	12.845	-4.895	1.00	16.62	A
ATOM	207	CA	LEU A	98	39.947	11.548	-4.624	1.00	17.04	A
ATOM	208	CB	LEU A	98	38.424	11.633	-4.743	1.00	16.89	A
ATOM	209	CG	LEU A	98	37.635	10.342	-4.508	1.00	19.46	A
ATOM	210	CD1	LEU A	98	37.990	9.762	-3.146	1.00	20.07	A
ATOM	211	CD2	LEU A	98	36.143	10.627	-4.588	1.00	17.93	A
ATOM	212	C	LEU A	98	40.512	10.597	-5.677	1.00	17.38	A
ATOM	213	O	LEU A	98	40.527	10.920	-6.863	1.00	18.60	A
ATOM	214	N	ALA A	99	40.995	9.438	-5.246	1.00	17.13	A
ATOM	215	CA	ALA A	99	41.570	8.466	-6.168	1.00	18.42	A
ATOM	216	CB	ALA A	99	43.090	8.524	-6.105	1.00	14.76	A
ATOM	217	C	ALA A	99	41.102	7.055	-5.848	1.00	21.40	A
ATOM	218	O	ALA A	99	40.941	6.691	-4.679	1.00	22.52	A
ATOM	219	N	ARG A	100	40.878	6.261	-6.888	1.00	19.77	A
ATOM	220	CA	ARG A	100	40.459	4.884	-6.643	1.00	20.85	A
ATOM	221	CB	ARG A	100	39.202	4.585	-7.518	1.00	24.22	A
ATOM	222	CG	ARG A	100	38.608	3.205	-7.256	1.00	31.78	A
ATOM	223	CD	ARG A	100	37.326	2.979	-8.048	1.00	36.24	A
ATOM	224	NE	ARG A	100	36.213	3.818	-7.594	1.00	41.40	A
ATOM	225	CZ	ARG A	100	35.566	3.662	-6.439	1.00	42.05	A
ATOM	226	NH1	ARG A	100	35.912	2.696	-5.598	1.00	40.67	A
ATOM	227	NH2	ARG A	100	34.559	4.468	-6.128	1.00	43.65	A
ATOM	228	C	ARG A	100	41.613	3.985	-7.129	1.00	18.63	A
ATOM	229	O	ARG A	100	42.078	4.065	-8.271	1.00	19.49	A
ATOM	230	N	GLU A	101	42.102	3.157	-6.212	1.00	16.43	A
ATOM	231	CA	GLU A	101	43.196	2.246	-6.533	1.00	16.11	A
ATOM	232	CB	GLU A	101	43.774	1.637	-5.248	1.00	16.79	A
ATOM	233	CG	GLU A	101	44.917	0.657	-5.488	1.00	16.51	A
ATOM	234	CD	GLU A	101	45.501	0.115	-4.200	1.00	18.20	A
ATOM	235	OE1	GLU A	101	44.733	-0.081	-3.239	1.00	18.32	A
ATOM	236	OE2	GLU A	101	46.725	-0.132	-4.150	1.00	17.14	A
ATOM	237	C	GLU A	101	42.625	1.152	-7.442	1.00	17.92	A
ATOM	238	O	GLU A	101	41.681	0.462	-7.069	1.00	18.02	A
ATOM	239	N	LEU A	102	43.198	1.002	-8.632	1.00	19.06	A
ATOM	240	CA	LEU A	102	42.718	0.025	-9.607	1.00	20.71	A
ATOM	241	CB	LEU A	102	43.569	0.097	-10.878	1.00	23.42	A
ATOM	242	CG	LEU A	102	43.531	1.426	-11.642	1.00	25.30	A
ATOM	243	CD1	LEU A	102	44.577	1.414	-12.748	1.00	27.88	A
ATOM	244	CD2	LEU A	102	42.140	1.647	-12.214	1.00	26.79	A
ATOM	245	C	LEU A	102	42.671	-1.418	-9.125	1.00	21.62	A
ATOM	246	O	LEU A	102	41.668	-2.103	-9.305	1.00	21.09	A
ATOM	247	N	ALA A	103	43.753	-1.874	-8.507	1.00	19.38	A
ATOM	248	CA	ALA A	103	43.836	-3.249	-8.035	1.00	20.87	A
ATOM	249	CB	ALA A	103	45.284	-3.571	-7.671	1.00	19.23	A
ATOM	250	C	ALA A	103	42.919	-3.629	-6.872	1.00	19.92	A
ATOM	251	O	ALA A	103	42.703	-4.815	-6.628	1.00	20.38	A
ATOM	252	N	THR A	104	42.361	-2.643	-6.175	1.00	18.12	A
ATOM	253	CA	THR A	104	41.517	-2.927	-5.018	1.00	17.15	A

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ATOM    254  CB  THR A 104      42.212  -2.484  -3.717  1.00 19.54      A
ATOM    255  OG1 THR A 104      42.456  -1.070  -3.773  1.00 19.26      A
ATOM    256  CG2 THR A 104      43.536  -3.219  -3.529  1.00 17.02      A
ATOM    257  C   THR A 104      40.159  -2.247  -5.026  1.00 19.44      A
ATOM    258  O   THR A 104      39.259  -2.648  -4.285  1.00 18.70      A
ATOM    259  N   SER A 105      40.034  -1.207  -5.847  1.00 19.65      A
ATOM    260  CA  SER A 105      38.819  -0.400  -5.967  1.00 19.37      A
ATOM    261  CB  SER A 105      37.598  -1.304  -6.173  1.00 21.81      A
ATOM    262  OG  SER A 105      36.431  -0.539  -6.412  1.00 23.01      A
ATOM    263  C   SER A 105      38.644   0.447  -4.701  1.00 18.99      A
ATOM    264  O   SER A 105      37.602   1.070  -4.488  1.00 18.66      A
ATOM    265  N   ARG A 106      39.674   0.468  -3.861  1.00 16.84      A
ATOM    266  CA  ARG A 106      39.655   1.267  -2.634  1.00 16.21      A
ATOM    267  CB  ARG A 106      40.827   0.886  -1.723  1.00 16.41      A
ATOM    268  CG  ARG A 106      40.619  -0.367  -0.906  1.00 15.49      A
ATOM    269  CD  ARG A 106      41.887  -0.755  -0.170  1.00 17.43      A
ATOM    270  NE  ARG A 106      41.620  -1.792   0.824  1.00 20.47      A
ATOM    271  CZ  ARG A 106      42.548  -2.568   1.371  1.00 20.24      A
ATOM    272  NH1 ARG A 106      43.821  -2.433   1.017  1.00 17.80      A
ATOM    273  NH2 ARG A 106      42.198  -3.468   2.285  1.00 20.14      A
ATOM    274  C   ARG A 106      39.785   2.746  -2.981  1.00 17.37      A
ATOM    275  O   ARG A 106      40.514   3.103  -3.902  1.00 17.75      A
ATOM    276  N   GLU A 107      39.085   3.599  -2.240  1.00 16.06      A
ATOM    277  CA  GLU A 107      39.156   5.039  -2.461  1.00 20.80      A
ATOM    278  CB  GLU A 107      37.779   5.694  -2.337  1.00 22.93      A
ATOM    279  CG  GLU A 107      36.711   5.171  -3.269  1.00 30.87      A
ATOM    280  CD  GLU A 107      35.431   5.975  -3.148  1.00 32.40      A
ATOM    281  OE1 GLU A 107      35.262   6.939  -3.923  1.00 33.74      A
ATOM    282  OE2 GLU A 107      34.608   5.654  -2.263  1.00 36.00      A
ATOM    283  C   GLU A 107      40.053   5.678  -1.410  1.00 18.93      A
ATOM    284  O   GLU A 107      39.891   5.427  -0.220  1.00 19.21      A
ATOM    285  N   TYR A 108      40.988   6.507  -1.852  1.00 16.70      A
ATOM    286  CA  TYR A 108      41.883   7.209  -0.942  1.00 15.86      A
ATOM    287  CB  TYR A 108      43.325   6.728  -1.104  1.00 15.30      A
ATOM    288  CG  TYR A 108      43.593   5.328  -0.612  1.00 16.33      A
ATOM    289  CD1 TYR A 108      43.765   5.066   0.746  1.00 16.36      A
ATOM    290  CE1 TYR A 108      44.046   3.769   1.201  1.00 18.48      A
ATOM    291  CD2 TYR A 108      43.701   4.268  -1.511  1.00 13.25      A
ATOM    292  CE2 TYR A 108      43.980   2.981  -1.075  1.00 17.28      A
ATOM    293  CZ  TYR A 108      44.152   2.736   0.276  1.00 19.17      A
ATOM    294  OH  TYR A 108      44.440   1.461   0.688  1.00 19.38      A
ATOM    295  C   TYR A 108      41.850   8.687  -1.292  1.00 16.80      A
ATOM    296  O   TYR A 108      41.560   9.058  -2.431  1.00 15.22      A
ATOM    297  N   ALA A 109      42.132   9.528  -0.306  1.00 14.61      A
ATOM    298  CA  ALA A 109      42.207  10.957  -0.539  1.00 14.30      A
ATOM    299  CB  ALA A 109      41.671  11.726   0.661  1.00 14.78      A
ATOM    300  C   ALA A 109      43.713  11.136  -0.667  1.00 16.79      A
ATOM    301  O   ALA A 109      44.450  10.983   0.317  1.00 16.52      A
ATOM    302  N   ILE A 110      44.182  11.410  -1.881  1.00 14.80      A
ATOM    303  CA  ILE A 110      45.609  11.574  -2.093  1.00 15.80      A
ATOM    304  CB  ILE A 110      46.065  10.863  -3.396  1.00 16.85      A
ATOM    305  CG2 ILE A 110      47.550  11.098  -3.632  1.00 16.80      A
ATOM    306  CG1 ILE A 110      45.774   9.358  -3.284  1.00 17.76      A
ATOM    307  CD1 ILE A 110      46.308   8.513  -4.437  1.00 16.07      A
ATOM    308  C   ILE A 110      46.004  13.045  -2.129  1.00 17.78      A
ATOM    309  O   ILE A 110      45.534  13.813  -2.976  1.00 16.24      A
ATOM    310  N   LYS A 111      46.846  13.435  -1.177  1.00 16.15      A
ATOM    311  CA  LYS A 111      47.326  14.808  -1.100  1.00 17.20      A
ATOM    312  CB  LYS A 111      47.700  15.176   0.344  1.00 17.41      A
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     ATOM    313   CG   LYS A 111      48.350  16.547   0.464  1.00 20.71      A
     ATOM    314   CD   LYS A 111      48.585  16.971   1.910  1.00 24.25      A
     ATOM    315   CE   LYS A 111      47.288  17.381   2.598  1.00 29.46      A
     ATOM    316   NZ   LYS A 111      47.516  17.866   4.000  1.00 30.50      A
5    ATOM    317   C    LYS A 111      48.551  14.890  -1.994  1.00 16.41      A
     ATOM    318   O    LYS A 111      49.509  14.137  -1.813  1.00 18.20      A
     ATOM    319   N    ILE A 112      48.509  15.798  -2.963  1.00 15.87      A
     ATOM    320   CA   ILE A 112      49.606  15.967  -3.907  1.00 17.28      A
     ATOM    321   CB   ILE A 112      49.079  15.911  -5.358  1.00 16.43      A
10   ATOM    322   CG2  ILE A 112      50.235  15.998  -6.341  1.00 15.12      A
     ATOM    323   CG1  ILE A 112      48.293  14.609  -5.565  1.00 16.82      A
     ATOM    324   CD1  ILE A 112      47.580  14.511  -6.904  1.00 18.47      A
     ATOM    325   C    ILE A 112      50.307  17.301  -3.663  1.00 19.03      A
     ATOM    326   O    ILE A 112      49.669  18.350  -3.635  1.00 19.15      A
15   ATOM    327   N    LEU A 113      51.622  17.245  -3.472  1.00 20.22      A
     ATOM    328   CA   LEU A 113      52.416  18.442  -3.214  1.00 22.36      A
     ATOM    329   CB   LEU A 113      52.995  18.397  -1.794  1.00 22.13      A
     ATOM    330   CG   LEU A 113      52.042  18.063  -0.646  1.00 22.46      A
     ATOM    331   CD1  LEU A 113      51.866  16.557  -0.553  1.00 23.81      A
20   ATOM    332   CD2  LEU A 113      52.603  18.595   0.660  1.00 23.68      A
     ATOM    333   C    LEU A 113      53.560  18.547  -4.215  1.00 23.37      A
     ATOM    334   O    LEU A 113      54.300  17.586  -4.424  1.00 23.11      A
     ATOM    335   N    GLU A 114      53.706  19.714  -4.834  1.00 23.88      A
     ATOM    336   CA   GLU A 114      54.771  19.920  -5.806  1.00 26.00      A
25   ATOM    337   CB   GLU A 114      54.435  21.111  -6.706  1.00 27.74      A
     ATOM    338   CG   GLU A 114      55.533  21.452  -7.696  1.00 35.07      A
     ATOM    339   CD   GLU A 114      55.220  22.696  -8.497  1.00 39.24      A
     ATOM    340   OE1  GLU A 114      54.808  23.703  -7.885  1.00 41.45      A
     ATOM    341   OE2  GLU A 114      55.395  22.670  -9.736  1.00 44.05      A
30   ATOM    342   C    GLU A 114      56.087  20.163  -5.067  1.00 24.37      A
     ATOM    343   O    GLU A 114      56.186  21.071  -4.238  1.00 24.43      A
     ATOM    344   N    LYS A 115      57.096  19.350  -5.360  1.00 24.10      A
     ATOM    345   CA   LYS A 115      58.376  19.493  -4.678  1.00 24.93      A
     ATOM    346   CB   LYS A 115      59.139  18.373  -5.103  1.00 23.72      A
35   ATOM    347   CG   LYS A 115      59.139  17.080  -4.308  1.00 23.09      A
     ATOM    348   CD   LYS A 115      60.064  15.944  -4.743  1.00 21.92      A
     ATOM    349   CE   LYS A 115      59.691  15.400  -6.117  1.00 22.42      A
     ATOM    350   NZ   LYS A 115      60.447  14.150  -6.448  1.00 19.71      A
     ATOM    351   C    LYS A 115      59.031  20.858  -4.868  1.00 26.87      A
40   ATOM    352   O    LYS A 115      59.492  21.469  -3.903  1.00 26.17      A
     ATOM    353   N    ARG A 116      59.058  21.348  -6.102  1.00 28.73      A
     ATOM    354   CA   ARG A 116      59.678  22.638  -6.380  1.00 29.66      A
     ATOM    355   CB   ARG A 116      59.533  22.980  -7.868  1.00 31.29      A
     ATOM    356   CG   ARG A 116      60.047  24.361  -8.267  1.00 33.19      A
45   ATOM    357   CD   ARG A 116      61.368  24.710  -7.590  1.00 35.13      A
     ATOM    358   NE   ARG A 116      62.329  23.612  -7.618  1.00 36.42      A
     ATOM    359   CZ   ARG A 116      63.510  23.648  -7.009  1.00 36.18      A
     ATOM    360   NH1  ARG A 116      63.871  24.729  -6.332  1.00 36.12      A
     ATOM    361   NH2  ARG A 116      64.324  22.602  -7.067  1.00 35.77      A
50   ATOM    362   C    ARG A 116      59.097  23.761  -5.519  1.00 29.70      A
     ATOM    363   O    ARG A 116      59.843  24.515  -4.889  1.00 29.16      A
     ATOM    364   N    HIS A 117      57.773  23.862  -5.472  1.00 27.22      A
     ATOM    365   CA   HIS A 117      57.126  24.903  -4.681  1.00 26.33      A
     ATOM    366   CB   HIS A 117      55.606  24.835  -4.848  1.00 28.41      A
55   ATOM    367   CG   HIS A 117      54.881  26.005  -4.258  1.00 31.82      A
     ATOM    368   CD2  HIS A 117      55.309  27.249  -3.935  1.00 33.19      A
     ATOM    369   ND1  HIS A 117      53.536  25.974  -3.961  1.00 34.30      A
     ATOM    370   CE1  HIS A 117      53.165  27.148  -3.480  1.00 34.58      A
     ATOM    371   NE2  HIS A 117      54.222  27.940  -3.455  1.00 35.18      A
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	ATOM	372	C	HIS A 117	57.477	24.780	-3.202	1.00	26.22	A
	ATOM	373	O	HIS A 117	57.737	25.776	-2.534	1.00	25.67	A
	ATOM	374	N	ILE A 118	57.469	23.554	-2.689	1.00	24.94	A
	ATOM	375	CA	ILE A 118	57.792	23.315	-1.285	1.00	23.94	A
5	ATOM	376	CB	ILE A 118	57.711	21.812	-0.952	1.00	23.50	A
	ATOM	377	CG2	ILE A 118	58.374	21.533	0.389	1.00	23.76	A
	ATOM	378	CG1	ILE A 118	56.246	21.362	-0.959	1.00	24.42	A
	ATOM	379	CD1	ILE A 118	56.066	19.858	-0.834	1.00	28.06	A
	ATOM	380	C	ILE A 118	59.195	23.821	-0.958	1.00	23.78	A
10	ATOM	381	O	ILE A 118	59.402	24.495	0.048	1.00	23.49	A
	ATOM	382	N	ILE A 119	60.153	23.489	-1.815	1.00	23.46	A
	ATOM	383	CA	ILE A 119	61.534	23.913	-1.619	1.00	25.13	A
	ATOM	384	CB	ILE A 119	62.467	23.250	-2.664	1.00	24.25	A
15	ATOM	385	CG2	ILE A 119	63.858	23.890	-2.617	1.00	22.47	A
	ATOM	386	CG1	ILE A 119	62.540	21.738	-2.395	1.00	25.05	A
	ATOM	387	CD1	ILE A 119	63.327	20.945	-3.439	1.00	24.62	A
	ATOM	388	C	ILE A 119	61.667	25.435	-1.705	1.00	25.96	A
	ATOM	389	O	ILE A 119	62.330	26.051	-0.872	1.00	24.78	A
20	ATOM	390	N	LYS A 120	61.028	26.039	-2.704	1.00	27.67	A
	ATOM	391	CA	LYS A 120	61.100	27.489	-2.879	1.00	30.29	A
	ATOM	392	CB	LYS A 120	60.242	27.940	-4.060	1.00	32.34	A
	ATOM	393	CG	LYS A 120	60.674	27.407	-5.409	1.00	39.30	A
	ATOM	394	CD	LYS A 120	59.765	27.950	-6.512	1.00	45.19	A
25	ATOM	395	CE	LYS A 120	58.294	27.636	-6.218	1.00	46.48	A
	ATOM	396	NZ	LYS A 120	57.363	28.155	-7.252	1.00	46.49	A
	ATOM	397	C	LYS A 120	60.647	28.247	-1.638	1.00	30.89	A
	ATOM	398	O	LYS A 120	61.303	29.198	-1.217	1.00	32.48	A
	ATOM	399	N	GLU A 121	59.527	27.825	-1.055	1.00	29.82	A
30	ATOM	400	CA	GLU A 121	58.986	28.488	0.128	1.00	30.33	A
	ATOM	401	CB	GLU A 121	57.455	28.416	0.117	1.00	33.04	A
	ATOM	402	CG	GLU A 121	56.794	29.021	-1.120	1.00	36.45	A
	ATOM	403	CD	GLU A 121	57.221	30.456	-1.373	1.00	39.88	A
	ATOM	404	OE1	GLU A 121	57.200	31.264	-0.420	1.00	40.53	A
35	ATOM	405	OE2	GLU A 121	57.573	30.778	-2.529	1.00	43.24	A
	ATOM	406	C	GLU A 121	59.511	27.930	1.451	1.00	30.37	A
	ATOM	407	O	GLU A 121	58.946	28.204	2.513	1.00	31.24	A
	ATOM	408	N	ASN A 122	60.588	27.151	1.390	1.00	29.03	A
	ATOM	409	CA	ASN A 122	61.183	26.573	2.594	1.00	28.46	A
40	ATOM	410	CB	ASN A 122	61.836	27.673	3.436	1.00	31.28	A
	ATOM	411	CG	ASN A 122	62.945	28.395	2.698	1.00	34.12	A
	ATOM	412	OD1	ASN A 122	62.697	29.143	1.754	1.00	35.57	A
	ATOM	413	ND2	ASN A 122	64.181	28.169	3.127	1.00	35.73	A
	ATOM	414	C	ASN A 122	60.157	25.835	3.456	1.00	26.89	A
45	ATOM	415	O	ASN A 122	60.085	26.055	4.663	1.00	27.23	A
	ATOM	416	N	LYS A 123	59.375	24.955	2.842	1.00	23.99	A
	ATOM	417	CA	LYS A 123	58.358	24.210	3.574	1.00	22.43	A
	ATOM	418	CB	LYS A 123	57.031	24.248	2.810	1.00	21.97	A
	ATOM	419	CG	LYS A 123	56.475	25.645	2.599	1.00	25.68	A
50	ATOM	420	CD	LYS A 123	56.253	26.354	3.927	1.00	27.54	A
	ATOM	421	CE	LYS A 123	55.822	27.796	3.716	1.00	31.30	A
	ATOM	422	NZ	LYS A 123	55.756	28.540	5.004	1.00	33.21	A
	ATOM	423	C	LYS A 123	58.748	22.759	3.821	1.00	22.20	A
	ATOM	424	O	LYS A 123	57.924	21.960	4.264	1.00	22.50	A
	ATOM	425	N	VAL A 124	59.997	22.412	3.535	1.00	20.59	A
55	ATOM	426	CA	VAL A 124	60.439	21.039	3.730	1.00	20.25	A
	ATOM	427	CB	VAL A 124	61.922	20.850	3.328	1.00	19.43	A
	ATOM	428	CG1	VAL A 124	62.346	19.407	3.573	1.00	18.69	A
	ATOM	429	CG2	VAL A 124	62.104	21.195	1.853	1.00	18.21	A
	ATOM	430	C	VAL A 124	60.236	20.561	5.163	1.00	19.53	A

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      ATOM    431  O    VAL A 124      59.841  19.418   5.385  1.00 20.02      A
      ATOM    432  N    PRO A 125      60.513  21.422   6.159  1.00 20.01      A
      ATOM    433  CD   PRO A 125      61.178  22.738   6.118  1.00 18.69      A
      ATOM    434  CA   PRO A 125      60.318  20.979   7.544  1.00 19.88      A
 5    ATOM    435  CB   PRO A 125      60.793  22.180   8.363  1.00 19.95      A
      ATOM    436  CG   PRO A 125      61.839  22.805   7.479  1.00 18.85      A
      ATOM    437  C    PRO A 125      58.848  20.642   7.824  1.00 19.76      A
      ATOM    438  O    PRO A 125      58.544  19.700   8.550  1.00 16.99      A
      ATOM    439  N    TYR A 126      57.947  21.418   7.235  1.00 18.98      A
10    ATOM    440  CA   TYR A 126      56.516  21.220   7.435  1.00 21.97      A
      ATOM    441  CB   TYR A 126      55.752  22.448   6.933  1.00 25.17      A
      ATOM    442  CG   TYR A 126      56.040  23.690   7.748  1.00 30.98      A
      ATOM    443  CD1  TYR A 126      55.438  23.886   8.991  1.00 33.95      A
      ATOM    444  CE1  TYR A 126      55.721  25.015   9.763  1.00 36.60      A
15    ATOM    445  CD2  TYR A 126      56.938  24.657   7.292  1.00 35.43      A
      ATOM    446  CE2  TYR A 126      57.231  25.792   8.058  1.00 37.20      A
      ATOM    447  CZ   TYR A 126      56.618  25.962   9.291  1.00 37.40      A
      ATOM    448  OH   TYR A 126      56.903  27.073  10.052  1.00 40.85      A
      ATOM    449  C    TYR A 126      55.990  19.956   6.762  1.00 21.35      A
20    ATOM    450  O    TYR A 126      55.265  19.175   7.383  1.00 20.49      A
      ATOM    451  N    VAL A 127      56.354  19.746   5.501  1.00 18.16      A
      ATOM    452  CA   VAL A 127      55.892  18.562   4.790  1.00 17.58      A
      ATOM    453  CB   VAL A 127      56.308  18.596   3.308  1.00 17.45      A
      ATOM    454  CG1  VAL A 127      55.786  17.350   2.600  1.00 17.97      A
25    ATOM    455  CG2  VAL A 127      55.751  19.850   2.641  1.00 14.90      A
      ATOM    456  C    VAL A 127      56.459  17.306   5.448  1.00 18.39      A
      ATOM    457  O    VAL A 127      55.769  16.298   5.583  1.00 18.14      A
      ATOM    458  N    THR A 128      57.716  17.381   5.869  1.00 17.50      A
      ATOM    459  CA   THR A 128      58.375  16.260   6.530  1.00 18.54      A
30    ATOM    460  CB   THR A 128      59.861  16.586   6.805  1.00 18.01      A
      ATOM    461  OG1  THR A 128      60.537  16.804   5.559  1.00 21.14      A
      ATOM    462  CG2  THR A 128      60.536  15.446   7.545  1.00 17.95      A
      ATOM    463  C    THR A 128      57.676  15.941   7.856  1.00 19.49      A
      ATOM    464  O    THR A 128      57.438  14.776   8.179  1.00 18.76      A
35    ATOM    465  N    ARG A 129      57.345  16.981   8.619  1.00 19.60      A
      ATOM    466  CA   ARG A 129      56.673  16.804   9.904  1.00 20.12      A
      ATOM    467  CB   ARG A 129      56.534  18.144  10.621  1.00 21.33      A
      ATOM    468  CG   ARG A 129      55.948  18.029  12.023  1.00 28.02      A
      ATOM    469  CD   ARG A 129      55.721  19.404  12.597  1.00 31.25      A
40    ATOM    470  NE   ARG A 129      56.940  20.205  12.560  1.00 37.78      A
      ATOM    471  CZ   ARG A 129      56.962  21.524  12.391  1.00 40.10      A
      ATOM    472  NH1  ARG A 129      55.828  22.197  12.239  1.00 40.03      A
      ATOM    473  NH2  ARG A 129      58.119  22.170  12.374  1.00 44.58      A
      ATOM    474  C    ARG A 129      55.288  16.186   9.729  1.00 20.08      A
45    ATOM    475  O    ARG A 129      54.891  15.305  10.496  1.00 20.40      A
      ATOM    476  N    GLU A 130      54.553  16.654   8.724  1.00 18.79      A
      ATOM    477  CA   GLU A 130      53.222  16.125   8.454  1.00 20.10      A
      ATOM    478  CB   GLU A 130      52.638  16.749   7.183  1.00 19.92      A
      ATOM    479  CG   GLU A 130      51.350  16.087   6.708  1.00 27.85      A
50    ATOM    480  CD   GLU A 130      50.581  16.933   5.707  1.00 29.72      A
      ATOM    481  OE1  GLU A 130      51.216  17.528   4.814  1.00 33.46      A
      ATOM    482  OE2  GLU A 130      49.339  16.996   5.807  1.00 30.74      A
      ATOM    483  C    GLU A 130      53.301  14.615   8.295  1.00 19.81      A
      ATOM    484  O    GLU A 130      52.553  13.875   8.935  1.00 18.37      A
55    ATOM    485  N    ARG A 131      54.219  14.162   7.447  1.00 20.41      A
      ATOM    486  CA   ARG A 131      54.397  12.735   7.202  1.00 22.45      A
      ATOM    487  CB   ARG A 131      55.442  12.511   6.098  1.00 25.16      A
      ATOM    488  CG   ARG A 131      55.742  11.043   5.840  1.00 28.75      A
      ATOM    489  CD   ARG A 131      56.736  10.837   4.708  1.00 33.75      A
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      ATOM    490   NE  ARG A 131      57.020    9.415    4.520  1.00 40.07           A
      ATOM    491   CZ  ARG A 131      57.756    8.915    3.532  1.00 43.07           A
      ATOM    492   NH1 ARG A 131      58.293    9.721    2.625  1.00 44.91           A
      ATOM    493   NH2 ARG A 131      57.955    7.606    3.449  1.00 44.45           A
 5    ATOM    494   C   ARG A 131      54.820   11.982    8.466  1.00 23.24           A
      ATOM    495   O   ARG A 131      54.241   10.948    8.804  1.00 23.86           A
      ATOM    496   N   ASP A 132      55.831   12.497    9.160  1.00 21.99           A
      ATOM    497   CA  ASP A 132      56.318   11.850   10.370  1.00 22.04           A
      ATOM    498   CB  ASP A 132      57.570   12.564   10.888  1.00 23.72           A
10    ATOM    499   CG  ASP A 132      58.750   12.442    9.932  1.00 27.77           A
      ATOM    500   OD1 ASP A 132      58.681   11.620    8.989  1.00 27.34           A
      ATOM    501   OD2 ASP A 132      59.753   13.163   10.128  1.00 28.70           A
      ATOM    502   C   ASP A 132      55.258   11.772   11.474  1.00 21.69           A
      ATOM    503   O   ASP A 132      55.077   10.723   12.092  1.00 22.75           A
15    ATOM    504   N   VAL A 133      54.551   12.868   11.725  1.00 19.54           A
      ATOM    505   CA  VAL A 133      53.525   12.843   12.759  1.00 18.52           A
      ATOM    506   CB  VAL A 133      52.908   14.244   12.990  1.00 19.26           A
      ATOM    507   CG1 VAL A 133      51.708   14.135   13.918  1.00 18.79           A
      ATOM    508   CG2 VAL A 133      53.953   15.180   13.604  1.00 18.80           A
20    ATOM    509   C   VAL A 133      52.419   11.854   12.398  1.00 19.46           A
      ATOM    510   O   VAL A 133      52.073   10.991   13.200  1.00 19.94           A
      ATOM    511   N   MET A 134      51.878   11.957   11.187  1.00 19.15           A
      ATOM    512   CA  MET A 134      50.807   11.052   10.792  1.00 21.25           A
      ATOM    513   CB  MET A 134      50.309   11.381    9.383  1.00 17.34           A
25    ATOM    514   CG  MET A 134      49.615   12.730    9.302  1.00 20.00           A
      ATOM    515   SD  MET A 134      48.643   12.952    7.798  1.00 24.21           A
      ATOM    516   CE  MET A 134      47.033   12.434    8.400  1.00 23.20           A
      ATOM    517   C   MET A 134      51.203    9.582   10.881  1.00 22.43           A
      ATOM    518   O   MET A 134      50.384    8.741   11.249  1.00 23.82           A
30    ATOM    519   N   SER A 135      52.454    9.273   10.556  1.00 23.09           A
      ATOM    520   CA  SER A 135      52.939    7.895   10.615  1.00 26.13           A
      ATOM    521   CB  SER A 135      54.356    7.798   10.039  1.00 26.17           A
      ATOM    522   OG  SER A 135      54.383    8.177    8.673  1.00 31.91           A
      ATOM    523   C   SER A 135      52.957    7.358   12.045  1.00 26.58           A
35    ATOM    524   O   SER A 135      52.926    6.148   12.261  1.00 26.42           A
      ATOM    525   N   ARG A 136      53.014    8.261   13.018  1.00 25.65           A
      ATOM    526   CA  ARG A 136      53.056    7.870   14.425  1.00 27.47           A
      ATOM    527   CB  ARG A 136      53.823    8.914   15.238  1.00 27.97           A
      ATOM    528   CG  ARG A 136      55.283    9.082   14.857  1.00 32.00           A
40    ATOM    529   CD  ARG A 136      55.904   10.218   15.664  1.00 33.03           A
      ATOM    530   NE  ARG A 136      55.602   10.073   17.084  1.00 36.11           A
      ATOM    531   CZ  ARG A 136      55.867   10.990   18.007  1.00 39.74           A
      ATOM    532   NH1 ARG A 136      56.449   12.132   17.661  1.00 40.55           A
      ATOM    533   NH2 ARG A 136      55.540   10.769   19.276  1.00 36.72           A
45    ATOM    534   C   ARG A 136      51.667    7.709   15.036  1.00 26.38           A
      ATOM    535   O   ARG A 136      51.516    7.121   16.106  1.00 27.06           A
      ATOM    536   N   LEU A 137      50.655    8.235   14.360  1.00 24.77           A
      ATOM    537   CA  LEU A 137      49.294    8.162   14.870  1.00 24.70           A
      ATOM    538   CB  LEU A 137      48.483    9.363   14.371  1.00 24.52           A
50    ATOM    539   CG  LEU A 137      49.050   10.760   14.662  1.00 26.67           A
      ATOM    540   CD1 LEU A 137      48.075   11.813   14.141  1.00 27.25           A
      ATOM    541   CD2 LEU A 137      49.279   10.945   16.155  1.00 27.09           A
      ATOM    542   C   LEU A 137      48.592    6.868   14.473  1.00 25.20           A
      ATOM    543   O   LEU A 137      48.619    6.469   13.309  1.00 25.99           A
55    ATOM    544   N   ASP A 138      47.971    6.218   15.451  1.00 21.89           A
      ATOM    545   CA  ASP A 138      47.239    4.977   15.219  1.00 21.35           A
      ATOM    546   CB  ASP A 138      48.124    3.761   15.523  1.00 22.14           A
      ATOM    547   CG  ASP A 138      47.432    2.448   15.201  1.00 24.90           A
      ATOM    548   OD1 ASP A 138      46.631    2.423   14.241  1.00 24.78           A
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     ATOM    549   OD2  ASP A 138     47.691    1.443   15.897   1.00 25.39      A
     ATOM    550   C    ASP A 138     46.031    4.991   16.138   1.00 20.47      A
     ATOM    551   O    ASP A 138     45.967    4.248   17.118   1.00 19.06      A
     ATOM    552   N    HIS A 139     45.075    5.852   15.810   1.00 18.27      A
  5  ATOM    553   CA   HIS A 139     43.869    6.016   16.606   1.00 18.21      A
     ATOM    554   CB   HIS A 139     44.096    7.157   17.612   1.00 15.84      A
     ATOM    555   CG   HIS A 139     42.985    7.332   18.600   1.00 15.24      A
     ATOM    556   CD2  HIS A 139     42.884    6.964   19.900   1.00 13.97      A
     ATOM    557   ND1  HIS A 139     41.791    7.943   18.280   1.00 14.74      A
 10  ATOM    558   CE1  HIS A 139     41.002    7.944   19.341   1.00 14.19      A
     ATOM    559   NE2  HIS A 139     41.641    7.356   20.336   1.00 14.15      A
     ATOM    560   C    HIS A 139     42.715    6.330   15.654   1.00 18.50      A
     ATOM    561   O    HIS A 139     42.879    7.080   14.693   1.00 20.80      A
     ATOM    562   N    PRO A 140     41.527    5.767   15.913   1.00 18.32      A
 15  ATOM    563   CD   PRO A 140     41.143    4.984   17.100   1.00 16.71      A
     ATOM    564   CA   PRO A 140     40.367    6.001   15.048   1.00 17.43      A
     ATOM    565   CB   PRO A 140     39.273    5.157   15.704   1.00 16.64      A
     ATOM    566   CG   PRO A 140     39.643    5.204   17.152   1.00 18.43      A
     ATOM    567   C    PRO A 140     39.914    7.441   14.803   1.00 18.77      A
 20  ATOM    568   O    PRO A 140     39.207    7.695   13.831   1.00 19.88      A
     ATOM    569   N    PHE A 141     40.301    8.381   15.664   1.00 17.14      A
     ATOM    570   CA   PHE A 141     39.874    9.767   15.477   1.00 16.42      A
     ATOM    571   CB   PHE A 141     39.568   10.422   16.836   1.00 14.60      A
     ATOM    572   CG   PHE A 141     38.386    9.817   17.556   1.00 15.26      A
 25  ATOM    573   CD1  PHE A 141     37.335    9.234   16.842   1.00 14.78      A
     ATOM    574   CD2  PHE A 141     38.297    9.880   18.942   1.00 13.70      A
     ATOM    575   CE1  PHE A 141     36.215    8.727   17.502   1.00 16.94      A
     ATOM    576   CE2  PHE A 141     37.118    9.375   19.615   1.00 15.75      A
     ATOM    577   CZ   PHE A 141     36.135    8.799   18.893   1.00 16.89      A
 30  ATOM    578   C    PHE A 141     40.857   10.641   14.694   1.00 16.15      A
     ATOM    579   O    PHE A 141     40.799   11.871   14.761   1.00 17.35      A
     ATOM    580   N    PHE A 142     41.748   10.011   13.941   1.00 15.88      A
     ATOM    581   CA   PHE A 142     42.727   10.756   13.154   1.00 17.89      A
     ATOM    582   CB   PHE A 142     44.115   10.645   13.793   1.00 17.57      A
 35  ATOM    583   CG   PHE A 142     44.240   11.371   15.103   1.00 18.74      A
     ATOM    584   CD1  PHE A 142     44.559   12.726   15.135   1.00 17.77      A
     ATOM    585   CD2  PHE A 142     43.997   10.711   16.304   1.00 18.74      A
     ATOM    586   CE1  PHE A 142     44.632   13.417   16.347   1.00 15.77      A
     ATOM    587   CE2  PHE A 142     44.065   11.393   17.522   1.00 17.56      A
 40  ATOM    588   CZ   PHE A 142     44.383   12.747   17.542   1.00 17.14      A
     ATOM    589   C    PHE A 142     42.793   10.231   11.729   1.00 19.12      A
     ATOM    590   O    PHE A 142     42.659    9.030   11.504   1.00 20.01      A
     ATOM    591   N    VAL A 143     42.978   11.135   10.769   1.00 18.72      A
     ATOM    592   CA   VAL A 143     43.102   10.735    9.371   1.00 18.52      A
 45  ATOM    593   CB   VAL A 143     43.294   11.961    8.440   1.00 20.66      A
     ATOM    594   CG1  VAL A 143     43.843   11.521    7.080   1.00 21.29      A
     ATOM    595   CG2  VAL A 143     41.958   12.673    8.252   1.00 22.97      A
     ATOM    596   C    VAL A 143     44.342    9.865    9.330   1.00 18.68      A
     ATOM    597   O    VAL A 143     45.355   10.199    9.943   1.00 18.42      A
 50  ATOM    598   N    LYS A 144     44.259    8.745    8.623   1.00 18.30      A
     ATOM    599   CA   LYS A 144     45.384    7.824    8.535   1.00 18.78      A
     ATOM    600   CB   LYS A 144     44.889    6.373    8.608   1.00 22.27      A
     ATOM    601   CG   LYS A 144     46.017    5.340    8.557   1.00 29.72      A
     ATOM    602   CD   LYS A 144     45.491    3.912    8.674   1.00 34.16      A
 55  ATOM    603   CE   LYS A 144     46.631    2.896    8.577   1.00 37.67      A
     ATOM    604   NZ   LYS A 144     46.138    1.484    8.629   1.00 39.02      A
     ATOM    605   C    LYS A 144     46.192    8.002    7.261   1.00 18.53      A
     ATOM    606   O    LYS A 144     45.643    8.314    6.200   1.00 18.18      A
     ATOM    607   N    LEU A 145     47.502    7.816    7.385   1.00 16.79      A
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	ATOM	608	CA	LEU A 145	48.411	7.900	6.251	1.00 17.45	A
	ATOM	609	CB	LEU A 145	49.686	8.653	6.641	1.00 18.82	A
	ATOM	610	CG	LEU A 145	50.734	8.902	5.549	1.00 20.23	A
	ATOM	611	CD1	LEU A 145	51.836	9.799	6.093	1.00 18.83	A
5	ATOM	612	CD2	LEU A 145	51.317	7.581	5.069	1.00 19.79	A
	ATOM	613	C	LEU A 145	48.739	6.450	5.907	1.00 19.19	A
	ATOM	614	O	LEU A 145	49.451	5.772	6.659	1.00 17.36	A
	ATOM	615	N	TYR A 146	48.215	5.972	4.782	1.00 17.28	A
	ATOM	616	CA	TYR A 146	48.444	4.593	4.358	1.00 17.57	A
10	ATOM	617	CB	TYR A 146	47.288	4.098	3.486	1.00 17.74	A
	ATOM	618	CG	TYR A 146	45.981	3.926	4.214	1.00 17.50	A
	ATOM	619	CD1	TYR A 146	45.099	4.995	4.377	1.00 16.50	A
	ATOM	620	CE1	TYR A 146	43.881	4.827	5.039	1.00 17.10	A
	ATOM	621	CD2	TYR A 146	45.620	2.686	4.735	1.00 18.28	A
15	ATOM	622	CE2	TYR A 146	44.411	2.506	5.399	1.00 19.84	A
	ATOM	623	CZ	TYR A 146	43.547	3.576	5.544	1.00 17.53	A
	ATOM	624	OH	TYR A 146	42.342	3.376	6.169	1.00 20.67	A
	ATOM	625	C	TYR A 146	49.735	4.376	3.582	1.00 18.72	A
	ATOM	626	O	TYR A 146	50.382	3.338	3.715	1.00 19.51	A
20	ATOM	627	N	PHE A 147	50.110	5.350	2.765	1.00 18.09	A
	ATOM	628	CA	PHE A 147	51.307	5.203	1.952	1.00 17.20	A
	ATOM	629	CB	PHE A 147	51.007	4.258	0.783	1.00 16.77	A
	ATOM	630	CG	PHE A 147	49.835	4.699	-0.070	1.00 17.75	A
	ATOM	631	CD1	PHE A 147	49.967	5.752	-0.975	1.00 16.58	A
25	ATOM	632	CD2	PHE A 147	48.595	4.075	0.053	1.00 18.07	A
	ATOM	633	CE1	PHE A 147	48.886	6.178	-1.742	1.00 19.62	A
	ATOM	634	CE2	PHE A 147	47.503	4.492	-0.710	1.00 18.56	A
	ATOM	635	CZ	PHE A 147	47.647	5.546	-1.610	1.00 19.27	A
	ATOM	636	C	PHE A 147	51.768	6.533	1.395	1.00 17.13	A
30	ATOM	637	O	PHE A 147	51.045	7.528	1.452	1.00 14.43	A
	ATOM	638	N	THR A 148	52.981	6.534	0.854	1.00 17.12	A
	ATOM	639	CA	THR A 148	53.541	7.718	0.232	1.00 17.96	A
	ATOM	640	CB	THR A 148	54.449	8.531	1.197	1.00 21.51	A
	ATOM	641	OG1	THR A 148	55.605	7.760	1.537	1.00 18.83	A
35	ATOM	642	CG2	THR A 148	53.700	8.897	2.472	1.00 19.60	A
	ATOM	643	C	THR A 148	54.386	7.262	-0.946	1.00 20.31	A
	ATOM	644	O	THR A 148	54.860	6.124	-0.991	1.00 18.94	A
	ATOM	645	N	PHE A 149	54.543	8.149	-1.916	1.00 19.16	A
	ATOM	646	CA	PHE A 149	55.368	7.877	-3.073	1.00 18.01	A
40	ATOM	647	CB	PHE A 149	54.748	6.801	-3.989	1.00 17.23	A
	ATOM	648	CG	PHE A 149	53.389	7.144	-4.544	1.00 16.88	A
	ATOM	649	CD1	PHE A 149	53.262	7.888	-5.712	1.00 18.58	A
	ATOM	650	CD2	PHE A 149	52.235	6.668	-3.927	1.00 17.31	A
45	ATOM	651	CE1	PHE A 149	52.007	8.149	-6.267	1.00 19.26	A
	ATOM	652	CE2	PHE A 149	50.972	6.923	-4.470	1.00 19.17	A
	ATOM	653	CZ	PHE A 149	50.858	7.663	-5.642	1.00 19.60	A
	ATOM	654	C	PHE A 149	55.542	9.205	-3.774	1.00 20.85	A
	ATOM	655	O	PHE A 149	54.934	10.200	-3.376	1.00 19.76	A
50	ATOM	656	N	GLN A 150	56.398	9.241	-4.782	1.00 19.79	A
	ATOM	657	CA	GLN A 150	56.636	10.481	-5.497	1.00 24.03	A
	ATOM	658	CB	GLN A 150	57.659	11.347	-4.739	1.00 24.45	A
	ATOM	659	CG	GLN A 150	58.986	10.645	-4.414	1.00 26.28	A
	ATOM	660	CD	GLN A 150	59.988	11.558	-3.692	1.00 29.02	A
	ATOM	661	OE1	GLN A 150	60.693	12.353	-4.321	1.00 27.05	A
55	ATOM	662	NE2	GLN A 150	60.042	11.449	-2.365	1.00 26.47	A
	ATOM	663	C	GLN A 150	57.160	10.203	-6.885	1.00 23.88	A
	ATOM	664	O	GLN A 150	57.63	9.118	-7.158	1.00 24.59	A
	ATOM	665	N	ASP A 151	56.987	11.171	-7.774	1.00 25.88	A
	ATOM	666	CA	ASP A 151	57.527	11.047	-9.117	1.00 26.49	A

	ATOM	667	CB	ASP A 151	56.437	11.126	-10.199	1.00	24.54	A
	ATOM	668	CG	ASP A 151	55.544	12.336	-10.064	1.00	24.95	A
	ATOM	669	OD1	ASP A 151	56.005	13.379	-9.561	1.00	22.44	A
	ATOM	670	OD2	ASP A 151	54.369	12.242	-10.490	1.00	25.72	A
5	ATOM	671	C	ASP A 151	58.515	12.203	-9.220	1.00	28.63	A
	ATOM	672	O	ASP A 151	58.890	12.780	-8.194	1.00	27.83	A
	ATOM	673	N	ASP A 152	58.934	12.560	-10.426	1.00	29.21	A
	ATOM	674	CA	ASP A 152	59.907	13.636	-10.562	1.00	31.88	A
	ATOM	675	CB	ASP A 152	60.325	13.792	-12.026	1.00	33.94	A
10	ATOM	676	CG	ASP A 152	61.033	12.564	-12.557	1.00	38.88	A
	ATOM	677	OD1	ASP A 152	61.817	11.959	-11.791	1.00	39.67	A
	ATOM	678	OD2	ASP A 152	60.817	12.211	-13.738	1.00	41.57	A
	ATOM	679	C	ASP A 152	59.487	14.994	-10.013	1.00	30.90	A
	ATOM	680	O	ASP A 152	60.316	15.735	-9.482	1.00	31.69	A
15	ATOM	681	N	GLU A 153	58.207	15.322	-10.107	1.00	29.44	A
	ATOM	682	CA	GLU A 153	57.767	16.632	-9.646	1.00	28.69	A
	ATOM	683	CB	GLU A 153	56.984	17.327	-10.766	1.00	32.90	A
	ATOM	684	CG	GLU A 153	57.451	16.987	-12.183	1.00	40.57	A
	ATOM	685	CD	GLU A 153	56.920	15.643	-12.675	1.00	45.78	A
20	ATOM	686	OE1	GLU A 153	55.682	15.482	-12.760	1.00	48.91	A
	ATOM	687	OE2	GLU A 153	57.736	14.747	-12.979	1.00	48.95	A
	ATOM	688	C	GLU A 153	56.929	16.683	-8.372	1.00	26.43	A
	ATOM	689	O	GLU A 153	56.947	17.688	-7.660	1.00	25.08	A
	ATOM	690	N	LYS A 154	56.205	15.610	-8.069	1.00	22.39	A
25	ATOM	691	CA	LYS A 154	55.318	15.631	-6.912	1.00	21.43	A
	ATOM	692	CB	LYS A 154	53.861	15.628	-7.398	1.00	20.33	A
	ATOM	693	CG	LYS A 154	53.505	16.716	-8.403	1.00	21.92	A
	ATOM	694	CD	LYS A 154	52.211	16.375	-9.146	1.00	19.70	A
	ATOM	695	CE	LYS A 154	51.775	17.503	-10.077	1.00	20.04	A
30	ATOM	696	NZ	LYS A 154	50.631	17.094	-10.951	1.00	19.97	A
	ATOM	697	C	LYS A 154	55.458	14.522	-5.881	1.00	20.43	A
	ATOM	698	O	LYS A 154	55.949	13.426	-6.173	1.00	21.13	A
	ATOM	699	N	LEU A 155	54.985	14.832	-4.676	1.00	19.69	A
	ATOM	700	CA	LEU A 155	54.950	13.900	-3.553	1.00	19.10	A
35	ATOM	701	CB	LEU A 155	55.362	14.588	-2.252	1.00	19.65	A
	ATOM	702	CG	LEU A 155	56.740	15.234	-2.129	1.00	21.20	A
	ATOM	703	CD1	LEU A 155	56.848	15.918	-0.770	1.00	23.42	A
	ATOM	704	CD2	LEU A 155	57.816	14.174	-2.277	1.00	23.08	A
	ATOM	705	C	LEU A 155	53.478	13.507	-3.427	1.00	18.87	A
40	ATOM	706	O	LEU A 155	52.600	14.348	-3.620	1.00	18.61	A
	ATOM	707	N	TYR A 156	53.209	12.249	-3.091	1.00	15.02	A
	ATOM	708	CA	TYR A 156	51.834	11.783	-2.934	1.00	16.29	A
	ATOM	709	CB	TYR A 156	51.470	10.769	-4.029	1.00	14.20	A
	ATOM	710	CG	TYR A 156	51.603	11.273	-5.449	1.00	17.29	A
45	ATOM	711	CD1	TYR A 156	52.857	11.429	-6.045	1.00	16.46	A
	ATOM	712	CE1	TYR A 156	52.978	11.884	-7.360	1.00	18.68	A
	ATOM	713	CD2	TYR A 156	50.474	11.588	-6.202	1.00	16.43	A
	ATOM	714	CE2	TYR A 156	50.583	12.048	-7.512	1.00	16.31	A
	ATOM	715	CZ	TYR A 156	51.835	12.192	-8.083	1.00	18.17	A
50	ATOM	716	OH	TYR A 156	51.941	12.651	-9.371	1.00	17.47	A
	ATOM	717	C	TYR A 156	51.657	11.108	-1.572	1.00	16.32	A
	ATOM	718	O	TYR A 156	52.412	10.197	-1.235	1.00	16.27	A
	ATOM	719	N	PHE A 157	50.678	11.568	-0.792	1.00	15.47	A
	ATOM	720	CA	PHE A 157	50.385	10.966	0.508	1.00	16.66	A
55	ATOM	721	CB	PHE A 157	50.324	12.014	1.629	1.00	16.91	A
	ATOM	722	CG	PHE A 157	51.631	12.708	1.907	1.00	18.96	A
	ATOM	723	CD1	PHE A 157	52.821	12.261	1.340	1.00	20.31	A
	ATOM	724	CD2	PHE A 157	51.664	13.829	2.732	1.00	21.12	A
	ATOM	725	CE1	PHE A 157	54.025	12.926	1.585	1.00	22.08	A

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      ATOM    726   CE2 PHE A 157      52.865  14.500   2.982  1.00 22.18      A
      ATOM    727   CZ  PHE A 157      54.045  14.045   2.405  1.00 21.27      A
      ATOM    728   C   PHE A 157      49.016  10.308   0.404  1.00 16.52      A
      ATOM    729   O   PHE A 157      48.029  10.979   0.110  1.00 17.32      A
   5  ATOM    730   N   GLY A 158      48.953   9.002   0.644  1.00 15.97      A
      ATOM    731   CA  GLY A 158      47.684   8.299   0.572  1.00 16.13      A
      ATOM    732   C   GLY A 158      47.000   8.383   1.920  1.00 14.94      A
      ATOM    733   O   GLY A 158      47.445   7.756   2.879  1.00 16.28      A
      ATOM    734   N   LEU A 159      45.915   9.145   1.989  1.00 13.50      A
  10  ATOM    735   CA  LEU A 159      45.191   9.340   3.241  1.00 15.20      A
      ATOM    736   CB  LEU A 159      45.031  10.835   3.517  1.00 14.20      A
      ATOM    737   CG  LEU A 159      46.270  11.726   3.385  1.00 19.00      A
      ATOM    738   CD1 LEU A 159      45.847  13.188   3.477  1.00 17.12      A
      ATOM    739   CD2 LEU A 159      47.275  11.390   4.471  1.00 14.71      A
  15  ATOM    740   C   LEU A 159      43.809   8.716   3.232  1.00 15.53      A
      ATOM    741   O   LEU A 159      43.232   8.472   2.177  1.00 16.05      A
      ATOM    742   N   SER A 160      43.268   8.469   4.418  1.00 15.86      A
      ATOM    743   CA  SER A 160      41.932   7.917   4.498  1.00 19.01      A
      ATOM    744   CB  SER A 160      41.566   7.582   5.949  1.00 22.90      A
  20  ATOM    745   OG  SER A 160      41.901   8.629   6.833  1.00 24.18      A
      ATOM    746   C   SER A 160      40.987   8.968   3.924  1.00 20.43      A
      ATOM    747   O   SER A 160      41.213  10.173   4.062  1.00 19.96      A
      ATOM    748   N   TYR A 161      39.945   8.508   3.250  1.00 19.20      A
      ATOM    749   CA  TYR A 161      38.975   9.406   2.644  1.00 20.37      A
  25  ATOM    750   CB  TYR A 161      38.471   8.785   1.332  1.00 20.00      A
      ATOM    751   CG  TYR A 161      37.314   9.502   0.666  1.00 20.72      A
      ATOM    752   CD1 TYR A 161      37.222  10.895   0.682  1.00 18.22      A
      ATOM    753   CE1 TYR A 161      36.180  11.557   0.029  1.00 22.24      A
      ATOM    754   CD2 TYR A 161      36.333   8.784  -0.020  1.00 20.53      A
  30  ATOM    755   CE2 TYR A 161      35.287   9.436  -0.678  1.00 24.24      A
      ATOM    756   CZ  TYR A 161      35.218  10.822  -0.648  1.00 22.32      A
      ATOM    757   OH  TYR A 161      34.194  11.471  -1.298  1.00 23.03      A
      ATOM    758   C   TYR A 161      37.812   9.681   3.598  1.00 20.14      A
      ATOM    759   O   TYR A 161      36.959   8.819   3.810  1.00 19.53      A
  35  ATOM    760   N   ALA A 162      37.791  10.880   4.178  1.00 19.92      A
      ATOM    761   CA  ALA A 162      36.721  11.271   5.099  1.00 21.07      A
      ATOM    762   CB  ALA A 162      37.187  12.419   6.002  1.00 19.60      A
      ATOM    763   C   ALA A 162      35.542  11.712   4.238  1.00 22.07      A
      ATOM    764   O   ALA A 162      35.436  12.875   3.860  1.00 20.66      A
  40  ATOM    765   N   LYS A 163      34.653  10.769   3.945  1.00 23.27      A
      ATOM    766   CA  LYS A 163      33.503  11.017   3.080  1.00 27.12      A
      ATOM    767   CB  LYS A 163      32.663   9.741   2.963  1.00 29.68      A
      ATOM    768   CG  LYS A 163      33.455   8.524   2.515  1.00 37.67      A
      ATOM    769   CD  LYS A 163      32.556   7.310   2.321  1.00 42.24      A
  45  ATOM    770   CE  LYS A 163      33.373   6.034   2.185  1.00 44.48      A
      ATOM    771   NZ  LYS A 163      34.143   5.735   3.430  1.00 44.88      A
      ATOM    772   C   LYS A 163      32.581  12.186   3.411  1.00 25.78      A
      ATOM    773   O   LYS A 163      32.103  12.863   2.506  1.00 26.53      A
      ATOM    774   N   ASN A 164      32.327  12.441   4.689  1.00 24.57      A
  50  ATOM    775   CA  ASN A 164      31.420  13.522   5.033  1.00 23.77      A
      ATOM    776   CB  ASN A 164      30.610  13.129   6.265  1.00 25.02      A
      ATOM    777   CG  ASN A 164      29.537  12.101   5.932  1.00 27.54      A
      ATOM    778   OD1 ASN A 164      28.772  12.281   4.983  1.00 28.79      A
      ATOM    779   ND2 ASN A 164      29.475  11.024   6.704  1.00 27.13      A
  55  ATOM    780   C   ASN A 164      31.999  14.931   5.169  1.00 24.43      A
      ATOM    781   O   ASN A 164      31.306  15.856   5.589  1.00 23.98      A
      ATOM    782   N   GLY A 165      33.262  15.097   4.795  1.00 21.56      A
      ATOM    783   CA  GLY A 165      33.873  16.414   4.836  1.00 24.39      A
      ATOM    784   C   GLY A 165      34.191  17.043   6.181  1.00 23.62      A
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	ATOM	785	O	GLY A 165	34.380	16.352	7.177	1.00 23.26	A
	ATOM	786	N	GLU A 166	34.234	18.373	6.186	1.00 23.22	A
	ATOM	787	CA	GLU A 166	34.563	19.176	7.362	1.00 24.54	A
	ATOM	788	CB	GLU A 166	35.055	20.558	6.913	1.00 25.04	A
5	ATOM	789	CG	GLU A 166	36.419	20.569	6.229	1.00 26.48	A
	ATOM	790	CD	GLU A 166	36.699	21.889	5.517	1.00 30.02	A
	ATOM	791	OE1	GLU A 166	36.081	22.906	5.889	1.00 29.33	A
	ATOM	792	OE2	GLU A 166	37.544	21.916	4.596	1.00 30.48	A
	ATOM	793	C	GLU A 166	33.436	19.372	8.369	1.00 24.44	A
10	ATOM	794	O	GLU A 166	32.279	19.541	8.001	1.00 22.76	A
	ATOM	795	N	LEU A 167	33.791	19.370	9.649	1.00 22.95	A
	ATOM	796	CA	LEU A 167	32.813	19.581	10.707	1.00 22.26	A
	ATOM	797	CB	LEU A 167	33.497	19.481	12.073	1.00 22.32	A
	ATOM	798	CG	LEU A 167	32.706	19.923	13.306	1.00 22.04	A
15	ATOM	799	CD1	LEU A 167	31.454	19.074	13.463	1.00 19.66	A
	ATOM	800	CD2	LEU A 167	33.597	19.805	14.537	1.00 21.17	A
	ATOM	801	C	LEU A 167	32.193	20.971	10.529	1.00 23.49	A
	ATOM	802	O	LEU A 167	31.047	21.209	10.907	1.00 23.56	A
	ATOM	803	N	LEU A 168	32.960	21.887	9.948	1.00 24.25	A
20	ATOM	804	CA	LEU A 168	32.473	23.245	9.722	1.00 26.64	A
	ATOM	805	CB	LEU A 168	33.560	24.099	9.066	1.00 25.62	A
	ATOM	806	CG	LEU A 168	33.198	25.546	8.707	1.00 27.34	A
	ATOM	807	CD1	LEU A 168	32.718	26.296	9.946	1.00 26.42	A
	ATOM	808	CD2	LEU A 168	34.418	26.238	8.119	1.00 26.74	A
25	ATOM	809	C	LEU A 168	31.234	23.218	8.829	1.00 27.13	A
	ATOM	810	O	LEU A 168	30.297	23.989	9.030	1.00 26.01	A
	ATOM	811	N	LYS A 169	31.233	22.320	7.848	1.00 26.41	A
	ATOM	812	CA	LYS A 169	30.106	22.210	6.934	1.00 27.70	A
	ATOM	813	CB	LYS A 169	30.324	21.064	5.945	1.00 30.49	A
30	ATOM	814	CG	LYS A 169	29.151	20.854	4.993	1.00 32.47	A
	ATOM	815	CD	LYS A 169	29.407	19.728	3.998	1.00 35.98	A
	ATOM	816	CE	LYS A 169	29.462	18.372	4.683	1.00 38.53	A
	ATOM	817	NZ	LYS A 169	29.622	17.263	3.702	1.00 41.00	A
	ATOM	818	C	LYS A 169	28.801	21.985	7.682	1.00 28.12	A
35	ATOM	819	O	LYS A 169	27.785	22.608	7.371	1.00 28.08	A
	ATOM	820	N	TYR A 170	28.826	21.094	8.668	1.00 26.53	A
	ATOM	821	CA	TYR A 170	27.624	20.791	9.434	1.00 26.95	A
	ATOM	822	CB	TYR A 170	27.810	19.476	10.193	1.00 25.03	A
	ATOM	823	CG	TYR A 170	27.898	18.300	9.251	1.00 26.65	A
40	ATOM	824	CD1	TYR A 170	26.745	17.661	8.790	1.00 28.27	A
	ATOM	825	CE1	TYR A 170	26.814	16.642	7.839	1.00 26.85	A
	ATOM	826	CD2	TYR A 170	29.127	17.884	8.742	1.00 27.83	A
	ATOM	827	CE2	TYR A 170	29.209	16.869	7.792	1.00 27.70	A
	ATOM	828	CZ	TYR A 170	28.049	16.254	7.343	1.00 30.02	A
45	ATOM	829	OH	TYR A 170	28.130	15.268	6.382	1.00 29.23	A
	ATOM	830	C	TYR A 170	27.229	21.918	10.376	1.00 27.59	A
	ATOM	831	O	TYR A 170	26.045	22.122	10.642	1.00 29.25	A
	ATOM	832	N	ILE A 171	28.208	22.660	10.882	1.00 28.16	A
	ATOM	833	CA	ILE A 171	27.883	23.770	11.763	1.00 29.03	A
50	ATOM	834	CB	ILE A 171	29.151	24.435	12.337	1.00 27.51	A
	ATOM	835	CG2	ILE A 171	28.773	25.705	13.084	1.00 27.97	A
	ATOM	836	CG1	ILE A 171	29.872	23.458	13.272	1.00 26.70	A
	ATOM	837	CD1	ILE A 171	31.163	23.996	13.856	1.00 24.07	A
	ATOM	838	C	ILE A 171	27.094	24.796	10.944	1.00 31.41	A
55	ATOM	839	O	ILE A 171	26.088	25.335	11.407	1.00 31.69	A
	ATOM	840	N	ARG A 172	27.546	25.047	9.719	1.00 33.21	A
	ATOM	841	CA	ARG A 172	26.874	26.000	8.844	1.00 36.54	A
	ATOM	842	CB	ARG A 172	27.734	26.314	7.616	1.00 37.73	A
	ATOM	843	CG	ARG A 172	29.057	27.011	7.912	1.00 41.65	A

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      ATOM    844   CD  ARG A 172     29.708  27.492   6.616  1.00 45.29      A
      ATOM    845   NE  ARG A 172     31.037  28.070   6.812  1.00 48.51      A
      ATOM    846   CZ  ARG A 172     31.314  29.059   7.658  1.00 51.53      A
      ATOM    847   NH1 ARG A 172     30.355  29.593   8.406  1.00 53.75      A
  5   ATOM    848   NH2 ARG A 172     32.553  29.526   7.748  1.00 51.21      A
      ATOM    849   C   ARG A 172     25.528  25.459   8.378  1.00 37.67      A
      ATOM    850   O   ARG A 172     24.550  26.200   8.288  1.00 39.09      A
      ATOM    851   N   LYS A 173     25.481  24.163   8.092  1.00 38.44      A
      ATOM    852   CA  LYS A 173     24.259  23.528   7.619  1.00 39.25      A
 10   ATOM    853   CB  LYS A 173     24.523  22.061   7.272  1.00 41.89      A
      ATOM    854   CG  LYS A 173     23.279  21.298   6.830  1.00 45.52      A
      ATOM    855   CD  LYS A 173     23.557  19.808   6.653  1.00 49.60      A
      ATOM    856   CE  LYS A 173     24.477  19.530   5.469  1.00 52.63      A
      ATOM    857   NZ  LYS A 173     23.855  19.894   4.160  1.00 54.61      A
 15   ATOM    858   C   LYS A 173     23.089  23.608   8.595  1.00 39.30      A
      ATOM    859   O   LYS A 173     21.981  23.960   8.201  1.00 39.62      A
      ATOM    860   N   ILE A 174     23.320  23.282   9.863  1.00 37.96      A
      ATOM    861   CA  ILE A 174     22.229  23.314  10.833  1.00 37.36      A
      ATOM    862   CB  ILE A 174     22.159  21.998  11.652  1.00 37.44      A
 20   ATOM    863   CG2 ILE A 174     22.058  20.802  10.709  1.00 38.37      A
      ATOM    864   CG1 ILE A 174     23.397  21.850  12.532  1.00 37.25      A
      ATOM    865   CD1 ILE A 174     23.355  20.620  13.418  1.00 36.85      A
      ATOM    866   C   ILE A 174     22.259  24.492  11.801  1.00 36.71      A
      ATOM    867   O   ILE A 174     21.448  24.556  12.724  1.00 38.05      A
 25   ATOM    868   N   GLY A 175     23.185  25.423  11.592  1.00 35.48      A
      ATOM    869   CA  GLY A 175     23.265  26.585  12.462  1.00 35.29      A
      ATOM    870   C   GLY A 175     24.053  26.360  13.737  1.00 35.06      A
      ATOM    871   O   GLY A 175     25.066  27.019  13.970  1.00 37.46      A
      ATOM    872   N   SER A 176     23.581  25.441  14.571  1.00 33.94      A
 30   ATOM    873   CA  SER A 176     24.253  25.113  15.822  1.00 32.84      A
      ATOM    874   CB  SER A 176     23.938  26.155  16.901  1.00 33.54      A
      ATOM    875   OG  SER A 176     22.599  26.056  17.347  1.00 34.86      A
      ATOM    876   C   SER A 176     23.796  23.731  16.276  1.00 32.34      A
      ATOM    877   O   SER A 176     22.726  23.263  15.884  1.00 32.82      A
 35   ATOM    878   N   PHE A 177     24.609  23.085  17.103  1.00 29.39      A
      ATOM    879   CA  PHE A 177     24.313  21.743  17.597  1.00 27.20      A
      ATOM    880   CB  PHE A 177     25.621  20.989  17.865  1.00 26.39      A
      ATOM    881   CG  PHE A 177     26.372  20.585  16.622  1.00 26.18      A
      ATOM    882   CD1 PHE A 177     26.210  21.277  15.426  1.00 25.30      A
 40   ATOM    883   CD2 PHE A 177     27.266  19.516  16.662  1.00 26.05      A
      ATOM    884   CE1 PHE A 177     26.923  20.912  14.290  1.00 26.59      A
      ATOM    885   CE2 PHE A 177     27.986  19.143  15.532  1.00 26.06      A
      ATOM    886   CZ  PHE A 177     27.815  19.841  14.343  1.00 25.42      A
      ATOM    887   C   PHE A 177     23.500  21.752  18.884  1.00 27.00      A
 45   ATOM    888   O   PHE A 177     23.704  22.610  19.747  1.00 26.48      A
      ATOM    889   N   ASP A 178     22.578  20.802  19.022  1.00 26.70      A
      ATOM    890   CA  ASP A 178     21.816  20.729  20.260  1.00 26.35      A
      ATOM    891   CB  ASP A 178     20.621  19.773  20.142  1.00 29.90      A
      ATOM    892   CG  ASP A 178     21.020  18.372  19.720  1.00 32.28      A
 50   ATOM    893   OD1 ASP A 178     22.157  17.949  20.014  1.00 35.21      A
      ATOM    894   OD2 ASP A 178     20.179  17.683  19.105  1.00 34.79      A
      ATOM    895   C   ASP A 178     22.810  20.228  21.311  1.00 25.03      A
      ATOM    896   O   ASP A 178     23.974  19.968  20.992  1.00 21.24      A
      ATOM    897   N   GLU A 179     22.361  20.083  22.552  1.00 23.60      A
 55   ATOM    898   CA  GLU A 179     23.247  19.644  23.619  1.00 25.18      A
      ATOM    899   CB  GLU A 179     22.542  19.770  24.971  1.00 27.60      A
      ATOM    900   CG  GLU A 179     23.324  19.176  26.130  1.00 32.58      A
      ATOM    901   CD  GLU A 179     22.997  19.845  27.449  1.00 35.82      A
      ATOM    902   OE1 GLU A 179     21.825  20.224  27.645  1.00 35.95      A
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	ATOM	903	OE2	GLU A 179	23.912	19.984	28.291	1.00 38.19	A
	ATOM	904	C	GLU A 179	23.808	18.235	23.450	1.00 24.08	A
	ATOM	905	O	GLU A 179	24.977	17.989	23.756	1.00 22.79	A
	ATOM	906	N	THR A 180	22.983	17.316	22.961	1.00 23.36	A
5	ATOM	907	CA	THR A 180	23.412	15.935	22.761	1.00 22.15	A
	ATOM	908	CB	THR A 180	22.224	15.054	22.320	1.00 23.77	A
	ATOM	909	OG1	THR A 180	21.222	15.075	23.341	1.00 26.37	A
	ATOM	910	CG2	THR A 180	22.670	13.616	22.088	1.00 22.66	A
	ATOM	911	C	THR A 180	24.533	15.830	21.724	1.00 22.01	A
10	ATOM	912	O	THR A 180	25.533	15.141	21.944	1.00 19.87	A
	ATOM	913	N	CYS A 181	24.365	16.511	20.596	1.00 21.21	A
	ATOM	914	CA	CYS A 181	25.372	16.480	19.541	1.00 22.22	A
	ATOM	915	CB	CYS A 181	24.800	17.065	18.250	1.00 24.62	A
	ATOM	916	SG	CYS A 181	23.435	16.080	17.560	1.00 29.50	A
15	ATOM	917	C	CYS A 181	26.633	17.232	19.954	1.00 23.07	A
	ATOM	918	O	CYS A 181	27.746	16.827	19.608	1.00 23.95	A
	ATOM	919	N	THR A 182	26.463	18.325	20.695	1.00 22.76	A
	ATOM	920	CA	THR A 182	27.606	19.103	21.161	1.00 21.49	A
	ATOM	921	CB	THR A 182	27.167	20.346	21.978	1.00 21.37	A
20	ATOM	922	OG1	THR A 182	26.459	21.262	21.134	1.00 22.50	A
	ATOM	923	CG2	THR A 182	28.379	21.046	22.565	1.00 18.36	A
	ATOM	924	C	THR A 182	28.454	18.215	22.071	1.00 21.48	A
	ATOM	925	O	THR A 182	29.669	18.090	21.894	1.00 19.95	A
	ATOM	926	N	ARG A 183	27.798	17.602	23.050	1.00 18.97	A
25	ATOM	927	CA	ARG A 183	28.468	16.723	23.996	1.00 19.39	A
	ATOM	928	CB	ARG A 183	27.455	16.140	24.984	1.00 19.46	A
	ATOM	929	CG	ARG A 183	28.030	15.062	25.887	1.00 18.77	A
	ATOM	930	CD	ARG A 183	27.021	14.571	26.925	1.00 21.19	A
	ATOM	931	NE	ARG A 183	26.605	15.642	27.824	1.00 19.46	A
30	ATOM	932	CZ	ARG A 183	25.496	16.362	27.679	1.00 20.45	A
	ATOM	933	NH1	ARG A 183	24.672	16.123	26.666	1.00 19.81	A
	ATOM	934	NH2	ARG A 183	25.224	17.338	28.539	1.00 17.11	A
	ATOM	935	C	ARG A 183	29.206	15.577	23.302	1.00 20.02	A
	ATOM	936	O	ARG A 183	30.383	15.333	23.573	1.00 19.97	A
35	ATOM	937	N	PHE A 184	28.520	14.871	22.409	1.00 19.24	A
	ATOM	938	CA	PHE A 184	29.144	13.746	21.722	1.00 18.04	A
	ATOM	939	CB	PHE A 184	28.158	13.078	20.764	1.00 21.05	A
	ATOM	940	CG	PHE A 184	28.719	11.857	20.098	1.00 22.67	A
	ATOM	941	CD1	PHE A 184	28.717	10.630	20.754	1.00 22.97	A
40	ATOM	942	CD2	PHE A 184	29.317	11.949	18.850	1.00 19.97	A
	ATOM	943	CE1	PHE A 184	29.308	9.510	20.176	1.00 23.53	A
	ATOM	944	CE2	PHE A 184	29.915	10.833	18.263	1.00 24.11	A
	ATOM	945	CZ	PHE A 184	29.910	9.613	18.928	1.00 22.97	A
	ATOM	946	C	PHE A 184	30.403	14.127	20.941	1.00 17.99	A
45	ATOM	947	O	PHE A 184	31.461	13.531	21.130	1.00 18.89	A
	ATOM	948	N	TYR A 185	30.292	15.110	20.056	1.00 15.73	A
	ATOM	949	CA	TYR A 185	31.443	15.519	19.265	1.00 15.72	A
	ATOM	950	CB	TYR A 185	30.992	16.413	18.111	1.00 17.33	A
	ATOM	951	CG	TYR A 185	30.364	15.584	17.015	1.00 19.37	A
50	ATOM	952	CD1	TYR A 185	31.159	14.809	16.168	1.00 16.53	A
	ATOM	953	CE1	TYR A 185	30.590	13.952	15.232	1.00 18.12	A
	ATOM	954	CD2	TYR A 185	28.976	15.484	16.892	1.00 18.18	A
	ATOM	955	CE2	TYR A 185	28.398	14.623	15.956	1.00 18.90	A
	ATOM	956	CZ	TYR A 185	29.211	13.861	15.133	1.00 18.41	A
55	ATOM	957	OH	TYR A 185	28.650	12.995	14.218	1.00 20.48	A
	ATOM	958	C	TYR A 185	32.544	16.172	20.083	1.00 15.79	A
	ATOM	959	O	TYR A 185	33.720	16.015	19.766	1.00 17.69	A
	ATOM	960	N	THR A 186	32.176	16.887	21.142	1.00 15.68	A
	ATOM	961	CA	THR A 186	33.184	17.504	21.997	1.00 16.03	A

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     ATOM    962  CB  THR A 186      32.559  18.403  23.094  1.00 16.62           A
     ATOM    963  OG1 THR A 186      31.866  19.503  22.481  1.00 14.79           A
     ATOM    964  CG2 THR A 186      33.656  18.953  24.019  1.00 14.68           A
     ATOM    965  C   THR A 186      33.954  16.375  22.680  1.00 15.59           A
  5  ATOM    966  O   THR A 186      35.176  16.443  22.823  1.00 13.77           A
     ATOM    967  N   ALA A 187      33.234  15.333  23.097  1.00 14.06           A
     ATOM    968  CA  ALA A 187      33.869  14.196  23.757  1.00 14.74           A
     ATOM    969  CB  ALA A 187      32.810  13.195  24.224  1.00 14.32           A
     ATOM    970  C   ALA A 187      34.875  13.509  22.821  1.00 14.41           A
 10  ATOM    971  O   ALA A 187      35.972  13.136  23.247  1.00 15.61           A
     ATOM    972  N   GLU A 188      34.516  13.340  21.549  1.00 14.01           A
     ATOM    973  CA  GLU A 188      35.443  12.704  20.615  1.00 13.50           A
     ATOM    974  CB  GLU A 188      34.782  12.449  19.251  1.00 12.85           A
     ATOM    975  CG  GLU A 188      33.622  11.454  19.282  1.00 12.71           A
 15  ATOM    976  CD  GLU A 188      33.464  10.685  17.979  1.00 15.01           A
     ATOM    977  OE1 GLU A 188      33.687  11.275  16.899  1.00 13.21           A
     ATOM    978  OE2 GLU A 188      33.110   9.484  18.031  1.00 17.69           A
     ATOM    979  C   GLU A 188      36.682  13.582  20.436  1.00 13.34           A
     ATOM    980  O   GLU A 188      37.803  13.085  20.408  1.00 14.69           A
 20  ATOM    981  N   ILE A 189      36.486  14.893  20.326  1.00 13.52           A
     ATOM    982  CA  ILE A 189      37.627  15.787  20.159  1.00 13.35           A
     ATOM    983  CB  ILE A 189      37.169  17.247  19.939  1.00 13.95           A
     ATOM    984  CG2 ILE A 189      38.381  18.165  19.822  1.00 12.47           A
     ATOM    985  CG1 ILE A 189      36.302  17.332  18.671  1.00 13.44           A
 25  ATOM    986  CD1 ILE A 189      35.588  18.664  18.491  1.00 14.29           A
     ATOM    987  C   ILE A 189      38.530  15.702  21.394  1.00 14.63           A
     ATOM    988  O   ILE A 189      39.753  15.595  21.271  1.00 12.97           A
     ATOM    989  N   VAL A 190      37.927  15.751  22.582  1.00 14.35           A
     ATOM    990  CA  VAL A 190      38.684  15.655  23.832  1.00 13.22           A
 30  ATOM    991  CB  VAL A 190      37.743  15.690  25.061  1.00 14.28           A
     ATOM    992  CG1 VAL A 190      38.509  15.267  26.326  1.00 15.08           A
     ATOM    993  CG2 VAL A 190      37.160  17.082  25.233  1.00 12.08           A
     ATOM    994  C   VAL A 190      39.468  14.338  23.859  1.00 14.61           A
     ATOM    995  O   VAL A 190      40.634  14.304  24.250  1.00 13.72           A
 35  ATOM    996  N   SER A 191      38.825  13.254  23.432  1.00 15.26           A
     ATOM    997  CA  SER A 191      39.478  11.943  23.421  1.00 16.81           A
     ATOM    998  CB  SER A 191      38.470  10.857  23.041  1.00 16.14           A
     ATOM    999  OG  SER A 191      39.018   9.569  23.238  1.00 16.94           A
     ATOM   1000  C   SER A 191      40.649  11.928  22.441  1.00 16.58           A
 40  ATOM   1001  O   SER A 191      41.697  11.335  22.713  1.00 13.96           A
     ATOM   1002  N   ALA A 192      40.468  12.586  21.300  1.00 15.26           A
     ATOM   1003  CA  ALA A 192      41.518  12.645  20.292  1.00 14.37           A
     ATOM   1004  CB  ALA A 192      40.989  13.296  19.016  1.00 14.43           A
     ATOM   1005  C   ALA A 192      42.695  13.440  20.845  1.00 16.46           A
 45  ATOM   1006  O   ALA A 192      43.851  13.038  20.697  1.00 17.96           A
     ATOM   1007  N   LEU A 193      42.401  14.563  21.496  1.00 15.02           A
     ATOM   1008  CA  LEU A 193      43.459  15.392  22.067  1.00 15.42           A
     ATOM   1009  CB  LEU A 193      42.884  16.712  22.600  1.00 12.88           A
     ATOM   1010  CG  LEU A 193      42.445  17.721  21.525  1.00 15.97           A
 50  ATOM   1011  CD1 LEU A 193      41.869  18.979  22.190  1.00 13.97           A
     ATOM   1012  CD2 LEU A 193      43.642  18.088  20.655  1.00 14.58           A
     ATOM   1013  C   LEU A 193      44.211  14.659  23.174  1.00 14.49           A
     ATOM   1014  O   LEU A 193      45.427  14.813  23.310  1.00 16.56           A
     ATOM   1015  N   GLU A 194      43.500  13.870  23.975  1.00 13.96           A
 55  ATOM   1016  CA  GLU A 194      44.179  13.123  25.032  1.00 14.08           A
     ATOM   1017  CB  GLU A 194      43.190  12.295  25.857  1.00 14.65           A
     ATOM   1018  CG  GLU A 194      43.882  11.301  26.789  1.00 17.09           A
     ATOM   1019  CD  GLU A 194      42.924  10.592  27.730  1.00 19.59           A
     ATOM   1020  OE1 GLU A 194      41.809  10.237  27.295  1.00 19.25           A
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       ATOM   1021  OE2 GLU A 194      43.302  10.380  28.906  1.00 20.20      A
       ATOM   1022  C   GLU A 194      45.208  12.199  24.386  1.00 13.57      A
       ATOM   1023  O   GLU A 194      46.337  12.093  24.847  1.00 14.23      A
       ATOM   1024  N   TYR A 195      44.822  11.544  23.301  1.00 14.89      A
 5     ATOM   1025  CA  TYR A 195      45.743  10.642  22.618  1.00 16.58      A
       ATOM   1026  CB  TYR A 195      45.030   9.910  21.488  1.00 17.29      A
       ATOM   1027  CG  TYR A 195      45.956   9.058  20.649  1.00 17.92      A
       ATOM   1028  CD1 TYR A 195      46.347   7.788  21.077  1.00 17.96      A
       ATOM   1029  CE1 TYR A 195      47.203   6.996  20.304  1.00 19.77      A
10     ATOM   1030  CD2 TYR A 195      46.445   9.524  19.428  1.00 16.67      A
       ATOM   1031  CE2 TYR A 195      47.299   8.744  18.650  1.00 18.51      A
       ATOM   1032  CZ  TYR A 195      47.671   7.481  19.094  1.00 20.24      A
       ATOM   1033  OH  TYR A 195      48.506   6.705  18.325  1.00 21.89      A
       ATOM   1034  C   TYR A 195      46.917  11.419  22.035  1.00 16.98      A
15     ATOM   1035  O   TYR A 195      48.081  11.047  22.203  1.00 14.61      A
       ATOM   1036  N   LEU A 196      46.599  12.507  21.347  1.00 16.30      A
       ATOM   1037  CA  LEU A 196      47.619  13.328  20.720  1.00 18.15      A
       ATOM   1038  CB  LEU A 196      46.969  14.502  19.982  1.00 18.59      A
       ATOM   1039  CG  LEU A 196      47.834  15.203  18.935  1.00 22.51      A
20     ATOM   1040  CD1 LEU A 196      48.222  14.206  17.841  1.00 20.94      A
       ATOM   1041  CD2 LEU A 196      47.060  16.375  18.338  1.00 22.98      A
       ATOM   1042  C   LEU A 196      48.592  13.844  21.763  1.00 17.75      A
       ATOM   1043  O   LEU A 196      49.801  13.644  21.649  1.00 18.33      A
       ATOM   1044  N   HIS A 197      48.064  14.495  22.792  1.00 17.12      A
25     ATOM   1045  CA  HIS A 197      48.913  15.042  23.842  1.00 18.47      A
       ATOM   1046  CB  HIS A 197      48.069  15.866  24.817  1.00 15.90      A
       ATOM   1047  CG  HIS A 197      47.571  17.152  24.231  1.00 19.15      A
       ATOM   1048  CD2 HIS A 197      47.830  17.745  23.038  1.00 18.22      A
       ATOM   1049  ND1 HIS A 197      46.704  17.992  24.897  1.00 17.47      A
30     ATOM   1050  CE1 HIS A 197      46.450  19.047  24.139  1.00 19.74      A
       ATOM   1051  NE2 HIS A 197      47.119  18.921  23.007  1.00 15.69      A
       ATOM   1052  C   HIS A 197      49.696  13.958  24.572  1.00 19.40      A
       ATOM   1053  O   HIS A 197      50.823  14.192  25.021  1.00 19.42      A
       ATOM   1054  N   GLY A 198      49.106  12.770  24.679  1.00 18.59      A
35     ATOM   1055  CA  GLY A 198      49.793  11.675  25.339  1.00 19.60      A
       ATOM   1056  C   GLY A 198      51.075  11.307  24.612  1.00 21.86      A
       ATOM   1057  O   GLY A 198      51.963  10.682  25.186  1.00 23.09      A
       ATOM   1058  N   LYS A 199      51.174  11.687  23.341  1.00 22.81      A
       ATOM   1059  CA  LYS A 199      52.368  11.401  22.549  1.00 24.43      A
40     ATOM   1060  CB  LYS A 199      51.990  10.905  21.154  1.00 26.00      A
       ATOM   1061  CG  LYS A 199      51.378   9.520  21.133  1.00 30.98      A
       ATOM   1062  CD  LYS A 199      51.291   9.002  19.708  1.00 36.85      A
       ATOM   1063  CE  LYS A 199      50.832   7.559  19.682  1.00 40.37      A
       ATOM   1064  NZ  LYS A 199      51.646   6.691  20.581  1.00 43.48      A
45     ATOM   1065  C   LYS A 199      53.253  12.631  22.414  1.00 23.88      A
       ATOM   1066  O   LYS A 199      54.144  12.669  21.568  1.00 24.97      A
       ATOM   1067  N   GLY A 200      52.997  13.638  23.243  1.00 24.00      A
       ATOM   1068  CA  GLY A 200      53.790  14.853  23.203  1.00 22.12      A
       ATOM   1069  C   GLY A 200      53.665  15.632  21.907  1.00 22.14      A
50     ATOM   1070  O   GLY A 200      54.632  16.231  21.439  1.00 22.41      A
       ATOM   1071  N   ILE A 201      52.475  15.630  21.320  1.00 20.00      A
       ATOM   1072  CA  ILE A 201      52.252  16.355  20.080  1.00 18.93      A
       ATOM   1073  CB  ILE A 201      51.784  15.414  18.955  1.00 19.70      A
       ATOM   1074  CG2 ILE A 201      51.414  16.226  17.716  1.00 20.12      A
55     ATOM   1075  CG1 ILE A 201      52.880  14.395  18.616  1.00 20.03      A
       ATOM   1076  CD1 ILE A 201      52.408  13.258  17.745  1.00 22.75      A
       ATOM   1077  C   ILE A 201      51.193  17.425  20.270  1.00 19.87      A
       ATOM   1078  O   ILE A 201      50.121  17.161  20.817  1.00 20.08      A
       ATOM   1079  N   ILE A 202      51.508  18.633  19.815  1.00 19.94      A
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	ATOM	1080	CA	ILE A 202	50.601	19.772	19.891	1.00	20.45	A
	ATOM	1081	CB	ILE A 202	51.352	21.040	20.356	1.00	22.21	A
	ATOM	1082	CG2	ILE A 202	50.381	22.220	20.470	1.00	22.67	A
	ATOM	1083	CG1	ILE A 202	52.033	20.775	21.700	1.00	24.19	A
5	ATOM	1084	CD1	ILE A 202	52.914	21.920	22.169	1.00	25.39	A
	ATOM	1085	C	ILE A 202	50.105	19.999	18.464	1.00	20.71	A
	ATOM	1086	O	ILE A 202	50.910	20.067	17.538	1.00	19.48	A
	ATOM	1087	N	HIS A 203	48.795	20.108	18.270	1.00	18.65	A
	ATOM	1088	CA	HIS A 203	48.280	20.319	16.919	1.00	18.02	A
10	ATOM	1089	CB	HIS A 203	46.775	20.057	16.874	1.00	16.31	A
	ATOM	1090	CG	HIS A 203	46.199	20.136	15.495	1.00	18.36	A
	ATOM	1091	CD2	HIS A 203	46.043	21.186	14.655	1.00	16.42	A
	ATOM	1092	ND1	HIS A 203	45.759	19.026	14.806	1.00	19.50	A
	ATOM	1093	CE1	HIS A 203	45.359	19.389	13.600	1.00	17.64	A
15	ATOM	1094	NE2	HIS A 203	45.522	20.694	13.483	1.00	20.87	A
	ATOM	1095	C	HIS A 203	48.589	21.738	16.405	1.00	18.92	A
	ATOM	1096	O	HIS A 203	49.073	21.906	15.282	1.00	16.21	A
	ATOM	1097	N	ARG A 204	48.301	22.744	17.232	1.00	18.60	A
	ATOM	1098	CA	ARG A 204	48.552	24.157	16.914	1.00	19.81	A
20	ATOM	1099	CB	ARG A 204	49.998	24.365	16.458	1.00	21.61	A
	ATOM	1100	CG	ARG A 204	51.024	24.137	17.550	1.00	23.82	A
	ATOM	1101	CD	ARG A 204	52.323	24.870	17.252	1.00	27.62	A
	ATOM	1102	NE	ARG A 204	52.932	24.449	15.994	1.00	29.43	A
	ATOM	1103	CZ	ARG A 204	54.125	24.861	15.572	1.00	33.10	A
25	ATOM	1104	NH1	ARG A 204	54.835	25.706	16.311	1.00	32.12	A
	ATOM	1105	NH2	ARG A 204	54.614	24.426	14.418	1.00	30.25	A
	ATOM	1106	C	ARG A 204	47.624	24.830	15.905	1.00	20.03	A
	ATOM	1107	O	ARG A 204	47.711	26.038	15.698	1.00	20.88	A
	ATOM	1108	N	ASP A 205	46.755	24.071	15.255	1.00	18.96	A
30	ATOM	1109	CA	ASP A 205	45.828	24.692	14.325	1.00	17.90	A
	ATOM	1110	CB	ASP A 205	46.418	24.741	12.914	1.00	18.95	A
	ATOM	1111	CG	ASP A 205	45.655	25.688	12.008	1.00	20.36	A
	ATOM	1112	OD1	ASP A 205	44.939	26.560	12.545	1.00	20.35	A
	ATOM	1113	OD2	ASP A 205	45.772	25.573	10.771	1.00	22.49	A
35	ATOM	1114	C	ASP A 205	44.500	23.956	14.328	1.00	19.60	A
	ATOM	1115	O	ASP A 205	43.876	23.751	13.287	1.00	21.53	A
	ATOM	1116	N	LEU A 206	44.063	23.569	15.521	1.00	18.53	A
	ATOM	1117	CA	LEU A 206	42.813	22.851	15.667	1.00	19.18	A
	ATOM	1118	CB	LEU A 206	42.693	22.295	17.087	1.00	18.94	A
40	ATOM	1119	CG	LEU A 206	41.511	21.358	17.346	1.00	23.10	A
	ATOM	1120	CD1	LEU A 206	41.615	20.142	16.436	1.00	23.01	A
	ATOM	1121	CD2	LEU A 206	41.504	20.933	18.808	1.00	22.97	A
	ATOM	1122	C	LEU A 206	41.639	23.772	15.361	1.00	19.05	A
	ATOM	1123	O	LEU A 206	41.556	24.880	15.886	1.00	19.25	A
45	ATOM	1124	N	LYS A 207	40.740	23.307	14.500	1.00	17.54	A
	ATOM	1125	CA	LYS A 207	39.564	24.081	14.110	1.00	18.60	A
	ATOM	1126	CB	LYS A 207	39.980	25.248	13.196	1.00	18.98	A
	ATOM	1127	CG	LYS A 207	40.786	24.817	11.982	1.00	18.20	A
	ATOM	1128	CD	LYS A 207	41.246	26.000	11.139	1.00	21.42	A
50	ATOM	1129	CE	LYS A 207	42.223	25.537	10.062	1.00	23.21	A
	ATOM	1130	NZ	LYS A 207	42.561	26.604	9.084	1.00	29.61	A
	ATOM	1131	C	LYS A 207	38.566	23.181	13.388	1.00	18.18	A
	ATOM	1132	O	LYS A 207	38.921	22.100	12.915	1.00	18.11	A
	ATOM	1133	N	PRO A 208	37.298	23.614	13.293	1.00	20.26	A
55	ATOM	1134	CD	PRO A 208	36.713	24.833	13.882	1.00	18.79	A
	ATOM	1135	CA	PRO A 208	36.272	22.814	12.616	1.00	19.67	A
	ATOM	1136	CB	PRO A 208	35.063	23.742	12.608	1.00	19.45	A
	ATOM	1137	CG	PRO A 208	35.231	24.509	13.891	1.00	21.81	A
	ATOM	1138	C	PRO A 208	36.674	22.372	11.209	1.00	21.04	A

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     ATOM   1139  O    PRO A 208      36.264  21.307  10.751  1.00 21.19       A
     ATOM   1140  N    GLU A 209      37.474  23.188  10.528  1.00 21.69       A
     ATOM   1141  CA   GLU A 209      37.928  22.872   9.170  1.00 22.64       A
     ATOM   1142  CB   GLU A 209      38.644  24.084   8.558  1.00 23.65       A
  5  ATOM   1143  CG   GLU A 209      39.253  23.825   7.185  1.00 27.24       A
     ATOM   1144  CD   GLU A 209      40.155  24.958   6.716  1.00 29.40       A
     ATOM   1145  OE1  GLU A 209      39.660  26.094   6.553  1.00 29.68       A
     ATOM   1146  OE2  GLU A 209      41.363  24.711   6.511  1.00 30.07       A
     ATOM   1147  C    GLU A 209      38.879  21.668   9.159  1.00 22.28       A
 10  ATOM   1148  O    GLU A 209      38.955  20.933   8.170  1.00 21.36       A
     ATOM   1149  N    ASN A 210      39.600  21.490  10.263  1.00 19.90       A
     ATOM   1150  CA   ASN A 210      40.574  20.412  10.436  1.00 19.44       A
     ATOM   1151  CB   ASN A 210      41.744  20.912  11.287  1.00 20.07       A
     ATOM   1152  CG   ASN A 210      42.746  21.698  10.479  1.00 25.77       A
 15  ATOM   1153  OD1  ASN A 210      43.571  22.427  11.029  1.00 26.73       A
     ATOM   1154  ND2  ASN A 210      42.687  21.548   9.158  1.00 25.15       A
     ATOM   1155  C    ASN A 210      40.005  19.151  11.078  1.00 18.63       A
     ATOM   1156  O    ASN A 210      40.712  18.154  11.234  1.00 18.29       A
     ATOM   1157  N    ILE A 211      38.739  19.202  11.469  1.00 16.31       A
 20  ATOM   1158  CA   ILE A 211      38.090  18.058  12.085  1.00 15.49       A
     ATOM   1159  CB   ILE A 211      37.336  18.488  13.354  1.00 15.40       A
     ATOM   1160  CG2  ILE A 211      36.582  17.311  13.950  1.00 14.59       A
     ATOM   1161  CG1  ILE A 211      38.342  19.046  14.365  1.00 15.91       A
     ATOM   1162  CD1  ILE A 211      37.720  19.669  15.590  1.00 15.98       A
 25  ATOM   1163  C    ILE A 211      37.131  17.485  11.059  1.00 17.26       A
     ATOM   1164  O    ILE A 211      35.995  17.947  10.926  1.00 18.16       A
     ATOM   1165  N    LEU A 212      37.599  16.486  10.317  1.00 15.97       A
     ATOM   1166  CA   LEU A 212      36.784  15.875   9.274  1.00 17.08       A
     ATOM   1167  CB   LEU A 212      37.685  15.249   8.202  1.00 17.78       A
 30  ATOM   1168  CG   LEU A 212      38.785  16.157   7.640  1.00 18.92       A
     ATOM   1169  CD1  LEU A 212      39.476  15.450   6.485  1.00 22.09       A
     ATOM   1170  CD2  LEU A 212      38.188  17.482   7.166  1.00 19.91       A
     ATOM   1171  C    LEU A 212      35.843  14.825   9.837  1.00 18.35       A
     ATOM   1172  O    LEU A 212      35.957  14.433  11.002  1.00 19.39       A
 35  ATOM   1173  N    LEU A 213      34.915  14.368   9.000  1.00 17.84       A
     ATOM   1174  CA   LEU A 213      33.942  13.362   9.403  1.00 19.94       A
     ATOM   1175  CB   LEU A 213      32.556  14.004   9.487  1.00 20.84       A
     ATOM   1176  CG   LEU A 213      32.396  15.059  10.583  1.00 20.31       A
     ATOM   1177  CD1  LEU A 213      31.124  15.837  10.367  1.00 22.75       A
 40  ATOM   1178  CD2  LEU A 213      32.379  14.378  11.940  1.00 23.93       A
     ATOM   1179  C    LEU A 213      33.914  12.187   8.426  1.00 20.98       A
     ATOM   1180  O    LEU A 213      33.743  12.379   7.218  1.00 19.55       A
     ATOM   1181  N    ASN A 214      34.088  10.970   8.935  1.00 20.44       A
     ATOM   1182  CA   ASN A 214      34.055   9.814   8.049  1.00 23.77       A
 45  ATOM   1183  CB   ASN A 214      34.745   8.596   8.674  1.00 25.30       A
     ATOM   1184  CG   ASN A 214      34.077   8.127   9.948  1.00 32.04       A
     ATOM   1185  OD1  ASN A 214      32.908   8.422  10.206  1.00 34.43       A
     ATOM   1186  ND2  ASN A 214      34.818   7.369  10.752  1.00 33.85       A
     ATOM   1187  C    ASN A 214      32.618   9.466   7.693  1.00 24.07       A
 50  ATOM   1188  O    ASN A 214      31.672  10.113   8.150  1.00 19.94       A
     ATOM   1189  N    GLU A 215      32.459   8.433   6.879  1.00 25.77       A
     ATOM   1190  CA   GLU A 215      31.138   8.003   6.445  1.00 28.69       A
     ATOM   1191  CB   GLU A 215      31.275   6.796   5.513  1.00 31.98       A
     ATOM   1192  CG   GLU A 215      29.970   6.334   4.896  1.00 40.22       A
 55  ATOM   1193  CD   GLU A 215      30.182   5.312   3.795  1.00 44.27       A
     ATOM   1194  OE1  GLU A 215      30.817   4.268   4.065  1.00 46.46       A
     ATOM   1195  OE2  GLU A 215      29.716   5.556   2.660  1.00 46.13       A
     ATOM   1196  C    GLU A 215      30.188   7.673   7.601  1.00 28.41       A
     ATOM   1197  O    GLU A 215      28.971   7.769   7.447  1.00 28.52       A
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	ATOM	1198	N	ASP A 216	30.737	7.287	8.752	1.00	26.77	A
	ATOM	1199	CA	ASP A 216	29.914	6.953	9.917	1.00	27.28	A
	ATOM	1200	CB	ASP A 216	30.538	5.795	10.696	1.00	31.27	A
	ATOM	1201	CG	ASP A 216	30.390	4.466	9.979	1.00	37.61	A
5	ATOM	1202	OD1	ASP A 216	29.274	4.170	9.499	1.00	39.45	A
	ATOM	1203	OD2	ASP A 216	31.382	3.710	9.902	1.00	41.84	A
	ATOM	1204	C	ASP A 216	29.697	8.135	10.862	1.00	26.37	A
	ATOM	1205	O	ASP A 216	29.136	7.984	11.950	1.00	25.73	A
	ATOM	1206	N	MET A 217	30.156	9.306	10.441	1.00	23.02	A
10	ATOM	1207	CA	MET A 217	30.015	10.527	11.218	1.00	21.83	A
	ATOM	1208	CB	MET A 217	28.537	10.789	11.517	1.00	23.24	A
	ATOM	1209	CG	MET A 217	27.742	11.186	10.274	1.00	22.98	A
	ATOM	1210	SD	MET A 217	28.464	12.616	9.430	1.00	27.57	A
	ATOM	1211	CE	MET A 217	27.679	13.974	10.332	1.00	26.68	A
15	ATOM	1212	C	MET A 217	30.844	10.618	12.502	1.00	21.51	A
	ATOM	1213	O	MET A 217	30.474	11.323	13.440	1.00	18.62	A
	ATOM	1214	N	HIS A 218	31.957	9.892	12.544	1.00	20.10	A
	ATOM	1215	CA	HIS A 218	32.873	9.964	13.678	1.00	19.86	A
	ATOM	1216	CB	HIS A 218	33.482	8.594	13.977	1.00	20.21	A
20	ATOM	1217	CG	HIS A 218	32.551	7.667	14.698	1.00	22.40	A
	ATOM	1218	CD2	HIS A 218	31.910	6.547	14.287	1.00	21.27	A
	ATOM	1219	ND1	HIS A 218	32.177	7.863	16.011	1.00	19.59	A
	ATOM	1220	CE1	HIS A 218	31.348	6.902	16.379	1.00	21.88	A
	ATOM	1221	NE2	HIS A 218	31.168	6.091	15.351	1.00	22.08	A
25	ATOM	1222	C	HIS A 218	33.947	10.921	13.172	1.00	19.10	A
	ATOM	1223	O	HIS A 218	34.170	11.004	11.965	1.00	20.31	A
	ATOM	1224	N	ILE A 219	34.617	11.638	14.067	1.00	17.21	A
	ATOM	1225	CA	ILE A 219	35.628	12.586	13.618	1.00	15.26	A
	ATOM	1226	CB	ILE A 219	35.987	13.614	14.716	1.00	15.38	A
30	ATOM	1227	CG2	ILE A 219	34.722	14.305	15.221	1.00	14.58	A
	ATOM	1228	CG1	ILE A 219	36.734	12.919	15.864	1.00	14.46	A
	ATOM	1229	CD1	ILE A 219	37.279	13.885	16.911	1.00	13.74	A
	ATOM	1230	C	ILE A 219	36.929	11.944	13.161	1.00	16.21	A
	ATOM	1231	O	ILE A 219	37.238	10.799	13.500	1.00	15.88	A
35	ATOM	1232	N	GLN A 220	37.677	12.711	12.378	1.00	15.62	A
	ATOM	1233	CA	GLN A 220	38.980	12.316	11.876	1.00	17.84	A
	ATOM	1234	CB	GLN A 220	38.872	11.595	10.525	1.00	20.00	A
	ATOM	1235	CG	GLN A 220	38.463	10.129	10.659	1.00	26.97	A
	ATOM	1236	CD	GLN A 220	38.648	9.343	9.372	1.00	29.95	A
40	ATOM	1237	OE1	GLN A 220	37.968	9.590	8.373	1.00	33.12	A
	ATOM	1238	NE2	GLN A 220	39.578	8.393	9.389	1.00	30.47	A
	ATOM	1239	C	GLN A 220	39.757	13.610	11.735	1.00	17.00	A
	ATOM	1240	O	GLN A 220	39.609	14.339	10.751	1.00	18.27	A
	ATOM	1241	N	ILE A 221	40.566	13.906	12.746	1.00	14.34	A
45	ATOM	1242	CA	ILE A 221	41.361	15.120	12.753	1.00	14.46	A
	ATOM	1243	CB	ILE A 221	41.867	15.416	14.175	1.00	12.30	A
	ATOM	1244	CG2	ILE A 221	42.764	16.656	14.167	1.00	14.78	A
	ATOM	1245	CG1	ILE A 221	40.660	15.613	15.102	1.00	13.92	A
	ATOM	1246	CD1	ILE A 221	41.003	15.901	16.543	1.00	15.06	A
50	ATOM	1247	C	ILE A 221	42.536	14.996	11.783	1.00	15.44	A
	ATOM	1248	O	ILE A 221	43.106	13.915	11.613	1.00	13.93	A
	ATOM	1249	N	THR A 222	42.877	16.101	11.127	1.00	15.36	A
	ATOM	1250	CA	THR A 222	43.980	16.098	10.174	1.00	17.52	A
	ATOM	1251	CB	THR A 222	43.470	15.836	8.750	1.00	19.92	A
55	ATOM	1252	OG1	THR A 222	44.587	15.637	7.875	1.00	18.78	A
	ATOM	1253	CG2	THR A 222	42.630	17.018	8.257	1.00	18.16	A
	ATOM	1254	C	THR A 222	44.735	17.428	10.192	1.00	19.60	A
	ATOM	1255	O	THR A 222	44.509	18.257	11.084	1.00	18.59	A
	ATOM	1256	N	ASP A 223	45.630	17.610	9.216	1.00	18.69	A

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     ATOM   1257  CA  ASP A 223      46.440  18.825   9.069  1.00 20.12       A
     ATOM   1258  CB  ASP A 223      45.532  20.065   9.108  1.00 23.51       A
     ATOM   1259  CG  ASP A 223      46.248  21.335   8.670  1.00 27.09       A
     ATOM   1260  OD1 ASP A 223      47.283  21.227   7.975  1.00 26.28       A
5    ATOM   1261  OD2 ASP A 223      45.765  22.438   9.009  1.00 26.15       A
     ATOM   1262  C   ASP A 223      47.516  18.913  10.150  1.00 21.73       A
     ATOM   1263  O   ASP A 223      47.439  19.751  11.055  1.00 22.76       A
     ATOM   1264  N   PHE A 224      48.535  18.063  10.027  1.00 20.75       A
     ATOM   1265  CA  PHE A 224      49.611  17.988  11.009  1.00 20.11       A
10   ATOM   1266  CB  PHE A 224      49.805  16.527  11.424  1.00 20.62       A
     ATOM   1267  CG  PHE A 224      48.682  15.991  12.263  1.00 21.41       A
     ATOM   1268  CD1 PHE A 224      48.598  16.312  13.614  1.00 23.05       A
     ATOM   1269  CD2 PHE A 224      47.681  15.212  11.693  1.00 22.27       A
     ATOM   1270  CE1 PHE A 224      47.528  15.868  14.389  1.00 23.30       A
15   ATOM   1271  CE2 PHE A 224      46.606  14.763  12.457  1.00 21.11       A
     ATOM   1272  CZ  PHE A 224      46.530  15.093  13.807  1.00 22.02       A
     ATOM   1273  C   PHE A 224      50.957  18.583  10.619  1.00 20.45       A
     ATOM   1274  O   PHE A 224      51.905  18.547  11.407  1.00 20.73       A
     ATOM   1275  N   GLY A 225      51.049  19.125   9.412  1.00 22.02       A
20   ATOM   1276  CA  GLY A 225      52.301  19.713   8.981  1.00 22.66       A
     ATOM   1277  C   GLY A 225      52.742  20.822   9.920  1.00 24.99       A
     ATOM   1278  O   GLY A 225      53.939  21.041  10.122  1.00 24.52       A
     ATOM   1279  N   THR A 226      51.779  21.524  10.508  1.00 23.50       A
     ATOM   1280  CA  THR A 226      52.106  22.613  11.416  1.00 25.16       A
25   ATOM   1281  CB  THR A 226      51.199  23.829  11.160  1.00 24.76       A
     ATOM   1282  OG1 THR A 226      49.831  23.410  11.113  1.00 22.68       A
     ATOM   1283  CG2 THR A 226      51.571  24.490   9.834  1.00 25.00       A
     ATOM   1284  C   THR A 226      52.046  22.233  12.894  1.00 25.79       A
     ATOM   1285  O   THR A 226      52.019  23.100  13.768  1.00 24.54       A
30   ATOM   1286  N   ALA A 227      52.037  20.935  13.173  1.00 24.97       A
     ATOM   1287  CA  ALA A 227      52.004  20.475  14.550  1.00 25.49       A
     ATOM   1288  CB  ALA A 227      51.659  18.993  14.607  1.00 22.85       A
     ATOM   1289  C   ALA A 227      53.384  20.715  15.149  1.00 27.70       A
     ATOM   1290  O   ALA A 227      54.331  21.047  14.435  1.00 26.60       A
35   ATOM   1291  N   LYS A 228      53.491  20.558  16.461  1.00 28.53       A
     ATOM   1292  CA  LYS A 228      54.760  20.745  17.149  1.00 32.12       A
     ATOM   1293  CB  LYS A 228      54.699  21.974  18.054  1.00 33.81       A
     ATOM   1294  CG  LYS A 228      56.007  22.294  18.765  1.00 41.23       A
     ATOM   1295  CD  LYS A 228      57.082  22.725  17.768  1.00 47.57       A
40   ATOM   1296  CE  LYS A 228      58.401  23.056  18.462  1.00 49.82       A
     ATOM   1297  NZ  LYS A 228      59.459  23.425  17.480  1.00 51.49       A
     ATOM   1298  C   LYS A 228      55.019  19.504  17.985  1.00 33.25       A
     ATOM   1299  O   LYS A 228      54.190  19.129  18.815  1.00 33.70       A
     ATOM   1300  N   VAL A 229      56.159  18.860  17.756  1.00 33.64       A
45   ATOM   1301  CA  VAL A 229      56.516  17.661  18.501  1.00 34.66       A
     ATOM   1302  CB  VAL A 229      57.248  16.646  17.609  1.00 33.50       A
     ATOM   1303  CG1 VAL A 229      57.619  15.419  18.415  1.00 32.34       A
     ATOM   1304  CG2 VAL A 229      56.370  16.264  16.436  1.00 34.25       A
     ATOM   1305  C   VAL A 229      57.420  18.035  19.668  1.00 37.57       A
50   ATOM   1306  O   VAL A 229      58.581  18.392  19.474  1.00 35.91       A
     ATOM   1307  N   LEU A 230      56.877  17.948  20.878  1.00 40.57       A
     ATOM   1308  CA  LEU A 230      57.615  18.289  22.088  1.00 46.10       A
     ATOM   1309  CB  LEU A 230      56.654  18.417  23.270  1.00 44.71       A
     ATOM   1310  CG  LEU A 230      55.627  19.545  23.207  1.00 44.50       A
55   ATOM   1311  CD1 LEU A 230      54.673  19.430  24.383  1.00 44.39       A
     ATOM   1312  CD2 LEU A 230      56.340  20.885  23.214  1.00 44.81       A
     ATOM   1313  C   LEU A 230      58.695  17.279  22.440  1.00 50.42       A
     ATOM   1314  O   LEU A 230      58.603  16.104  22.089  1.00 51.64       A
     ATOM   1315  N   SER A 231      59.717  17.756  23.145  1.00 55.81       A
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      ATOM   1316   CA   SER A 231    60.824  16.914  23.583  1.00 61.14        A
      ATOM   1317   CB   SER A 231    62.077  17.200  22.750  1.00 61.27        A
      ATOM   1318   OG   SER A 231    62.444  18.568  22.823  1.00 62.85        A
      ATOM   1319   C    SER A 231    61.124  17.126  25.071  1.00 64.65        A
   5  ATOM   1320   O    SER A 231    61.392  16.164  25.794  1.00 65.70        A
      ATOM   1321   N    PRO A 232    61.081  18.387  25.549  1.00 67.54        A
      ATOM   1322   CD   PRO A 232    60.854  19.651  24.823  1.00 68.60        A
      ATOM   1323   CA   PRO A 232    61.358  18.655  26.966  1.00 68.74        A
      ATOM   1324   CB   PRO A 232    61.109  20.158  27.086  1.00 68.83        A
  10  ATOM   1325   CG   PRO A 232    61.505  20.666  25.737  1.00 68.96        A
      ATOM   1326   C    PRO A 232    60.460  17.846  27.899  1.00 69.17        A
      ATOM   1327   O    PRO A 232    59.335  17.494  27.541  1.00 69.94        A
      ATOM   1328   N    ALA A 237    57.424  23.198  27.637  1.00 80.06        A
      ATOM   1329   CA   ALA A 237    56.783  23.047  26.335  1.00 79.29        A
  15  ATOM   1330   CB   ALA A 237    55.275  22.907  26.512  1.00 78.64        A
      ATOM   1331   C    ALA A 237    57.092  24.239  25.433  1.00 79.07        A
      ATOM   1332   O    ALA A 237    56.250  25.113  25.249  1.00 79.47        A
      ATOM   1333   N    ALA A 238    58.297  24.280  24.871  1.00 78.57        A
      ATOM   1334   CA   ALA A 238    58.683  25.383  23.992  1.00 78.50        A
  20  ATOM   1335   CB   ALA A 238    60.186  25.347  23.728  1.00 78.50        A
      ATOM   1336   C    ALA A 238    57.920  25.327  22.673  1.00 78.15        A
      ATOM   1337   O    ALA A 238    57.243  24.341  22.375  1.00 77.96        A
      ATOM   1338   N    ALA A 239    58.027  26.393  21.887  1.00 77.28        A
      ATOM   1339   CA   ALA A 239    57.338  26.452  20.603  1.00 76.27        A
  25  ATOM   1340   CB   ALA A 239    55.849  26.489  20.827  1.00 76.61        A
      ATOM   1341   C    ALA A 239    57.766  27.667  19.793  1.00 75.38        A
      ATOM   1342   O    ALA A 239    58.955  27.955  19.700  1.00 75.89        A
      ATOM   1343   N    ASN A 240    56.781  28.357  19.214  1.00 73.95        A
      ATOM   1344   CA   ASN A 240    56.967  29.553  18.389  1.00 71.07        A
  30  ATOM   1345   CB   ASN A 240    58.151  30.400  18.874  1.00 71.47        A
      ATOM   1346   CG   ASN A 240    59.459  30.055  18.174  1.00 72.06        A
      ATOM   1347   OD1  ASN A 240    59.575  30.149  16.943  1.00 72.03        A
      ATOM   1348   ND2  ASN A 240    60.470  29.665  18.964  1.00 71.91        A
      ATOM   1349   C    ASN A 240    57.188  29.178  16.928  1.00 69.41        A
  35  ATOM   1350   O    ASN A 240    57.480  28.024  16.624  1.00 70.09        A
      ATOM   1351   N    ALA A 241    57.055  30.165  16.038  1.00 66.62        A
      ATOM   1352   CA   ALA A 241    57.246  30.013  14.585  1.00 63.94        A
      ATOM   1353   C    ALA A 241    55.952  30.080  13.772  1.00 60.63        A
      ATOM   1354   O    ALA A 241    55.840  30.880  12.845  1.00 61.29        A
  40  ATOM   1355   CB   ALA A 241    57.979  28.704  14.246  1.00 65.23        A
      ATOM   1356   N    PHE A 242    54.984  29.236  14.113  1.00 56.72        A
      ATOM   1357   CA   PHE A 242    53.712  29.196  13.394  1.00 52.53        A
      ATOM   1358   CB   PHE A 242    53.419  27.767  12.923  1.00 49.14        A
      ATOM   1359   CG   PHE A 242    52.040  27.590  12.354  1.00 47.38        A
  45  ATOM   1360   CD1  PHE A 242    51.731  28.067  11.085  1.00 47.69        A
      ATOM   1361   CD2  PHE A 242    51.038  26.975  13.102  1.00 45.45        A
      ATOM   1362   CE1  PHE A 242    50.445  27.937  10.565  1.00 46.75        A
      ATOM   1363   CE2  PHE A 242    49.751  26.840  12.594  1.00 45.41        A
      ATOM   1364   CZ   PHE A 242    49.453  27.323  11.322  1.00 46.55        A
  50  ATOM   1365   C    PHE A 242    52.534  29.688  14.229  1.00 50.08        A
      ATOM   1366   O    PHE A 242    52.502  29.505  15.444  1.00 49.86        A
      ATOM   1367   N    VAL A 243    51.566  30.305  13.557  1.00 47.67        A
      ATOM   1368   CA   VAL A 243    50.355  30.809  14.200  1.00 46.21        A
      ATOM   1369   CB   VAL A 243    50.340  32.352  14.258  1.00 47.36        A
  55  ATOM   1370   CG1  VAL A 243    49.012  32.844  14.825  1.00 47.54        A
      ATOM   1371   CG2  VAL A 243    51.497  32.842  15.109  1.00 48.50        A
      ATOM   1372   C    VAL A 243    49.150  30.342  13.389  1.00 44.12        A
      ATOM   1373   O    VAL A 243    48.956  30.765  12.247  1.00 44.46        A
      ATOM   1374   N    GLY A 244    48.348  29.467  13.985  1.00 40.48        A
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     ATOM   1375  CA   GLY A 244      47.176  28.941  13.306  1.00 37.65      A
     ATOM   1376  C    GLY A 244      46.101  29.960  12.964  1.00 35.39      A
     ATOM   1377  O    GLY A 244      46.313  31.168  13.065  1.00 35.92      A
     ATOM   1378  N    THR A 245      44.936  29.463  12.560  1.00 33.30      A
   5 ATOM   1379  CA   THR A 245      43.813  30.312  12.184  1.00 30.20      A
     ATOM   1380  CB   THR A 245      42.593  29.450  11.829  1.00 32.00      A
     ATOM   1381  OG1  THR A 245      42.952  28.573  10.755  1.00 32.81      A
     ATOM   1382  CG2  THR A 245      41.419  30.319  11.390  1.00 28.34      A
     ATOM   1383  C    THR A 245      43.476  31.296  13.296  1.00 27.96      A
  10 ATOM   1384  O    THR A 245      43.212  30.907  14.434  1.00 25.46      A
     ATOM   1385  N    ALA A 246      43.486  32.576  12.938  1.00 25.22      A
     ATOM   1386  CA   ALA A 246      43.247  33.675  13.867  1.00 23.27      A
     ATOM   1387  CB   ALA A 246      42.956  34.955  13.082  1.00 22.94      A
     ATOM   1388  C    ALA A 246      42.178  33.475  14.934  1.00 21.27      A
  15 ATOM   1389  O    ALA A 246      42.431  33.705  16.114  1.00 20.93      A
     ATOM   1390  N    GLN A 247      40.988  33.047  14.536  1.00 19.67      A
     ATOM   1391  CA   GLN A 247      39.911  32.886  15.504  1.00 20.17      A
     ATOM   1392  CB   GLN A 247      38.608  32.535  14.779  1.00 21.89      A
     ATOM   1393  CG   GLN A 247      38.522  33.076  13.355  1.00 26.18      A
  20 ATOM   1394  CD   GLN A 247      37.220  33.794  13.064  1.00 27.30      A
     ATOM   1395  OE1  GLN A 247      36.172  33.447  13.605  1.00 30.13      A
     ATOM   1396  NE2  GLN A 247      37.278  34.792  12.189  1.00 28.70      A
     ATOM   1397  C    GLN A 247      40.181  31.849  16.595  1.00 19.43      A
     ATOM   1398  O    GLN A 247      39.546  31.883  17.648  1.00 18.93      A
  25 ATOM   1399  N    TYR A 248      41.132  30.948  16.359  1.00 18.60      A
     ATOM   1400  CA   TYR A 248      41.441  29.896  17.329  1.00 19.20      A
     ATOM   1401  CB   TYR A 248      41.333  28.529  16.642  1.00 17.53      A
     ATOM   1402  CG   TYR A 248      40.013  28.362  15.927  1.00 19.32      A
     ATOM   1403  CD1  TYR A 248      38.859  28.010  16.625  1.00 17.69      A
  30 ATOM   1404  CE1  TYR A 248      37.617  27.976  15.990  1.00 18.18      A
     ATOM   1405  CD2  TYR A 248      39.897  28.664  14.569  1.00 16.87      A
     ATOM   1406  CE2  TYR A 248      38.665  28.635  13.924  1.00 19.17      A
     ATOM   1407  CZ   TYR A 248      37.527  28.295  14.643  1.00 19.46      A
     ATOM   1408  OH   TYR A 248      36.299  28.311  14.023  1.00 18.98      A
  35 ATOM   1409  C    TYR A 248      42.810  30.039  17.993  1.00 20.42      A
     ATOM   1410  O    TYR A 248      43.208  29.191  18.792  1.00 19.19      A
     ATOM   1411  N    VAL A 249      43.523  31.114  17.673  1.00 20.20      A
     ATOM   1412  CA   VAL A 249      44.841  31.343  18.251  1.00 20.91      A
     ATOM   1413  CB   VAL A 249      45.542  32.532  17.570  1.00 21.18      A
  40 ATOM   1414  CG1  VAL A 249      46.821  32.896  18.317  1.00 22.45      A
     ATOM   1415  CG2  VAL A 249      45.862  32.170  16.139  1.00 24.01      A
     ATOM   1416  C    VAL A 249      44.764  31.606  19.750  1.00 21.52      A
     ATOM   1417  O    VAL A 249      43.915  32.368  20.216  1.00 22.72      A
     ATOM   1418  N    SER A 250      45.654  30.965  20.503  1.00 20.70      A
  45 ATOM   1419  CA   SER A 250      45.697  31.133  21.951  1.00 21.65      A
     ATOM   1420  CB   SER A 250      46.370  29.919  22.613  1.00 22.02      A
     ATOM   1421  OG   SER A 250      47.692  29.725  22.132  1.00 22.12      A
     ATOM   1422  C    SER A 250      46.476  32.402  22.280  1.00 22.13      A
     ATOM   1423  O    SER A 250      47.332  32.828  21.511  1.00 22.77      A
  50 ATOM   1424  N    PRO A 251      46.180  33.029  23.425  1.00 22.23      A
     ATOM   1425  CD   PRO A 251      45.163  32.684  24.433  1.00 22.97      A
     ATOM   1426  CA   PRO A 251      46.893  34.254  23.800  1.00 22.52      A
     ATOM   1427  CB   PRO A 251      46.233  34.650  25.127  1.00 23.06      A
     ATOM   1428  CG   PRO A 251      45.726  33.329  25.676  1.00 22.55      A
  55 ATOM   1429  C    PRO A 251      48.414  34.115  23.907  1.00 22.15      A
     ATOM   1430  O    PRO A 251      49.143  35.047  23.563  1.00 22.62      A
     ATOM   1431  N    GLU A 252      48.901  32.966  24.367  1.00 20.69      A
     ATOM   1432  CA   GLU A 252      50.347  32.772  24.500  1.00 21.40      A
     ATOM   1433  CB   GLU A 252      50.673  31.382  25.071  1.00 20.59      A
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     ATOM   1434  CG  GLU A 252      49.993  30.232  24.352  1.00 21.91      A
     ATOM   1435  CD  GLU A 252      48.691  29.822  25.014  1.00 21.51      A
     ATOM   1436  OE1 GLU A 252      47.989  30.707  25.550  1.00 21.46      A
     ATOM   1437  OE2 GLU A 252      48.367  28.613  24.993  1.00 20.23      A
  5  ATOM   1438  C   GLU A 252      51.071  32.970  23.167  1.00 22.99      A
     ATOM   1439  O   GLU A 252      52.191  33.480  23.136  1.00 23.17      A
     ATOM   1440  N   LEU A 253      50.441  32.576  22.064  1.00 23.00      A
     ATOM   1441  CA  LEU A 253      51.068  32.753  20.758  1.00 25.62      A
     ATOM   1442  CB  LEU A 253      50.277  32.029  19.669  1.00 26.75      A
 10  ATOM   1443  CG  LEU A 253      50.743  30.620  19.296  1.00 31.87      A
     ATOM   1444  CD1 LEU A 253      50.433  29.651  20.422  1.00 31.81      A
     ATOM   1445  CD2 LEU A 253      50.044  30.179  18.015  1.00 31.86      A
     ATOM   1446  C   LEU A 253      51.201  34.228  20.371  1.00 26.94      A
     ATOM   1447  O   LEU A 253      52.107  34.601  19.626  1.00 27.09      A
 15  ATOM   1448  N   LEU A 254      50.297  35.059  20.877  1.00 25.83      A
     ATOM   1449  CA  LEU A 254      50.297  36.485  20.564  1.00 27.26      A
     ATOM   1450  CB  LEU A 254      48.858  37.006  20.564  1.00 25.84      A
     ATOM   1451  CG  LEU A 254      47.882  36.290  19.621  1.00 24.69      A
     ATOM   1452  CD1 LEU A 254      46.459  36.724  19.932  1.00 23.64      A
 20  ATOM   1453  CD2 LEU A 254      48.236  36.597  18.177  1.00 24.24      A
     ATOM   1454  C   LEU A 254      51.134  37.314  21.537  1.00 30.62      A
     ATOM   1455  O   LEU A 254      51.633  38.383  21.187  1.00 32.35      A
     ATOM   1456  N   THR A 255      51.292  36.821  22.758  1.00 32.47      A
     ATOM   1457  CA  THR A 255      52.056  37.547  23.759  1.00 36.70      A
 25  ATOM   1458  CB  THR A 255      51.368  37.478  25.127  1.00 34.51      A
     ATOM   1459  OG1 THR A 255      51.188  36.106  25.494  1.00 35.49      A
     ATOM   1460  CG2 THR A 255      50.013  38.166  25.077  1.00 33.40      A
     ATOM   1461  C   THR A 255      53.477  37.035  23.910  1.00 40.09      A
     ATOM   1462  O   THR A 255      54.430  37.793  23.772  1.00 43.69      A
 30  ATOM   1463  N   GLU A 256      53.617  35.747  24.189  1.00 44.77      A
     ATOM   1464  CA  GLU A 256      54.932  35.144  24.382  1.00 49.15      A
     ATOM   1465  CB  GLU A 256      54.866  34.143  25.534  1.00 51.24      A
     ATOM   1466  CG  GLU A 256      54.514  34.786  26.862  1.00 56.03      A
     ATOM   1467  CD  GLU A 256      54.053  33.780  27.893  1.00 58.83      A
 35  ATOM   1468  OE1 GLU A 256      54.766  32.776  28.107  1.00 62.13      A
     ATOM   1469  OE2 GLU A 256      52.979  33.996  28.494  1.00 60.34      A
     ATOM   1470  C   GLU A 256      55.475  34.456  23.137  1.00 50.09      A
     ATOM   1471  O   GLU A 256      56.616  33.995  23.127  1.00 50.42      A
     ATOM   1472  N   LYS A 257      54.658  34.389  22.090  1.00 51.21      A
 40  ATOM   1473  CA  LYS A 257      55.064  33.746  20.845  1.00 51.22      A
     ATOM   1474  CB  LYS A 257      56.244  34.502  20.227  1.00 53.28      A
     ATOM   1475  CG  LYS A 257      56.558  34.125  18.790  1.00 55.19      A
     ATOM   1476  CD  LYS A 257      57.709  34.961  18.253  1.00 57.52      A
     ATOM   1477  CE  LYS A 257      57.952  34.694  16.777  1.00 58.52      A
 45  ATOM   1478  NZ  LYS A 257      58.290  33.268  16.515  1.00 60.88      A
     ATOM   1479  C   LYS A 257      55.467  32.302  21.138  1.00 50.74      A
     ATOM   1480  O   LYS A 257      56.432  31.790  20.577  1.00 52.26      A
     ATOM   1481  N   SER A 258      54.721  31.654  22.027  1.00 48.07      A
     ATOM   1482  CA  SER A 258      54.999  30.273  22.402  1.00 46.87      A
 50  ATOM   1483  CB  SER A 258      55.590  30.229  23.812  1.00 48.88      A
     ATOM   1484  OG  SER A 258      54.741  30.892  24.734  1.00 53.14      A
     ATOM   1485  C   SER A 258      53.735  29.415  22.342  1.00 44.07      A
     ATOM   1486  O   SER A 258      52.617  29.932  22.417  1.00 44.17      A
     ATOM   1487  N   ALA A 259      53.917  28.105  22.204  1.00 38.30      A
 55  ATOM   1488  CA  ALA A 259      52.793  27.180  22.127  1.00 34.73      A
     ATOM   1489  CB  ALA A 259      52.551  26.779  20.684  1.00 34.16      A
     ATOM   1490  C   ALA A 259      53.042  25.940  22.977  1.00 32.34      A
     ATOM   1491  O   ALA A 259      54.172  25.459  23.086  1.00 31.81      A
     ATOM   1492  N   CYS A 260      51.975  25.428  23.579  1.00 28.58      A
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      ATOM   1493  CA   CYS A 260      52.056  24.244  24.425  1.00 26.27      A
      ATOM   1494  CB   CYS A 260      52.183  24.654  25.892  1.00 26.53      A
      ATOM   1495  SG   CYS A 260      50.846  25.739  26.469  1.00 32.91      A
      ATOM   1496  C    CYS A 260      50.786  23.435  24.224  1.00 22.83      A
  5   ATOM   1497  O    CYS A 260      49.892  23.856  23.495  1.00 22.14      A
      ATOM   1498  N    LYS A 261      50.706  22.277  24.868  1.00 20.02      A
      ATOM   1499  CA   LYS A 261      49.526  21.434  24.744  1.00 20.65      A
      ATOM   1500  CB   LYS A 261      49.619  20.243  25.696  1.00 23.28      A
      ATOM   1501  CG   LYS A 261      50.716  19.253  25.347  1.00 27.44      A
 10   ATOM   1502  CD   LYS A 261      50.732  18.117  26.350  1.00 29.98      A
      ATOM   1503  CE   LYS A 261      51.922  17.203  26.134  1.00 32.34      A
      ATOM   1504  NZ   LYS A 261      51.940  16.121  27.153  1.00 33.28      A
      ATOM   1505  C    LYS A 261      48.268  22.229  25.062  1.00 19.20      A
      ATOM   1506  O    LYS A 261      47.253  22.092  24.387  1.00 18.08      A
 15   ATOM   1507  N    SER A 262      48.358  23.068  26.089  1.00 16.92      A
      ATOM   1508  CA   SER A 262      47.235  23.883  26.534  1.00 18.13      A
      ATOM   1509  CB   SER A 262      47.644  24.698  27.770  1.00 18.27      A
      ATOM   1510  OG   SER A 262      46.517  25.258  28.421  1.00 22.53      A
      ATOM   1511  C    SER A 262      46.736  24.811  25.424  1.00 16.77      A
 20   ATOM   1512  O    SER A 262      45.591  25.254  25.450  1.00 15.69      A
      ATOM   1513  N    SER A 263      47.595  25.118  24.456  1.00 16.44      A
      ATOM   1514  CA   SER A 263      47.175  25.970  23.347  1.00 16.89      A
      ATOM   1515  CB   SER A 263      48.340  26.228  22.382  1.00 18.49      A
      ATOM   1516  OG   SER A 263      49.402  26.909  23.031  1.00 22.10      A
 25   ATOM   1517  C    SER A 263      46.040  25.257  22.612  1.00 17.79      A
      ATOM   1518  O    SER A 263      45.099  25.898  22.148  1.00 17.57      A
      ATOM   1519  N    ASP A 264      46.119  23.928  22.517  1.00 16.30      A
      ATOM   1520  CA   ASP A 264      45.069  23.166  21.836  1.00 16.72      A
      ATOM   1521  CB   ASP A 264      45.483  21.704  21.620  1.00 15.92      A
 30   ATOM   1522  CG   ASP A 264      46.544  21.539  20.548  1.00 17.93      A
      ATOM   1523  OD1  ASP A 264      46.642  22.412  19.661  1.00 16.78      A
      ATOM   1524  OD2  ASP A 264      47.265  20.515  20.579  1.00 16.64      A
      ATOM   1525  C    ASP A 264      43.773  23.194  22.646  1.00 17.67      A
      ATOM   1526  O    ASP A 264      42.681  23.197  22.076  1.00 18.27      A
 35   ATOM   1527  N    LEU A 265      43.898  23.205  23.974  1.00 15.49      A
      ATOM   1528  CA   LEU A 265      42.730  23.232  24.849  1.00 14.75      A
      ATOM   1529  CB   LEU A 265      43.147  23.038  26.313  1.00 11.38      A
      ATOM   1530  CG   LEU A 265      43.711  21.641  26.621  1.00 14.04      A
      ATOM   1531  CD1  LEU A 265      44.249  21.579  28.052  1.00 13.96      A
 40   ATOM   1532  CD2  LEU A 265      42.619  20.603  26.416  1.00 11.62      A
      ATOM   1533  C    LEU A 265      41.999  24.557  24.675  1.00 15.13      A
      ATOM   1534  O    LEU A 265      40.777  24.620  24.785  1.00 16.75      A
      ATOM   1535  N    TRP A 266      42.746  25.622  24.405  1.00 16.08      A
      ATOM   1536  CA   TRP A 266      42.118  26.918  24.184  1.00 16.96      A
 45   ATOM   1537  CB   TRP A 266      43.176  28.015  24.023  1.00 17.28      A
      ATOM   1538  CG   TRP A 266      42.618  29.326  23.521  1.00 20.54      A
      ATOM   1539  CD2  TRP A 266      42.313  30.490  24.301  1.00 20.07      A
      ATOM   1540  CE2  TRP A 266      41.782  31.459  23.417  1.00 20.46      A
      ATOM   1541  CE3  TRP A 266      42.435  30.810  25.660  1.00 20.68      A
 50   ATOM   1542  CD1  TRP A 266      42.270  29.631  22.231  1.00 19.53      A
      ATOM   1543  NE1  TRP A 266      41.769  30.908  22.163  1.00 19.61      A
      ATOM   1544  CZ2  TRP A 266      41.372  32.727  23.850  1.00 20.90      A
      ATOM   1545  CZ3  TRP A 266      42.026  32.073  26.091  1.00 19.45      A
      ATOM   1546  CH2  TRP A 266      41.501  33.015  25.185  1.00 20.71      A
 55   ATOM   1547  C    TRP A 266      41.284  26.795  22.913  1.00 17.22      A
      ATOM   1548  O    TRP A 266      40.139  27.240  22.863  1.00 18.03      A
      ATOM   1549  N    ALA A 267      41.863  26.181  21.886  1.00 17.50      A
      ATOM   1550  CA   ALA A 267      41.155  25.990  20.626  1.00 16.16      A
      ATOM   1551  CB   ALA A 267      42.050  25.290  19.621  1.00 14.28      A
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      ATOM   1552  C    ALA A 267      39.901  25.159  20.891  1.00 16.28          A
      ATOM   1553  O    ALA A 267      38.835  25.436  20.346  1.00 16.46          A
      ATOM   1554  N    LEU A 268      40.031  24.144  21.739  1.00 16.57          A
      ATOM   1555  CA   LEU A 268      38.890  23.299  22.084  1.00 17.03          A
   5  ATOM   1556  CB   LEU A 268      39.292  22.260  23.139  1.00 15.35          A
      ATOM   1557  CG   LEU A 268      38.158  21.429  23.754  1.00 19.00          A
      ATOM   1558  CD1  LEU A 268      37.505  20.578  22.678  1.00 16.17          A
      ATOM   1559  CD2  LEU A 268      38.718  20.537  24.881  1.00 17.49          A
      ATOM   1560  C    LEU A 268      37.766  24.179  22.628  1.00 15.72          A
  10  ATOM   1561  O    LEU A 268      36.603  24.031  22.247  1.00 15.28          A
      ATOM   1562  N    GLY A 269      38.119  25.099  23.520  1.00 14.34          A
      ATOM   1563  CA   GLY A 269      37.124  25.989  24.092  1.00 13.39          A
      ATOM   1564  C    GLY A 269      36.406  26.808  23.031  1.00 14.94          A
      ATOM   1565  O    GLY A 269      35.193  27.014  23.114  1.00 14.76          A
  15  ATOM   1566  N    CYS A 270      37.146  27.279  22.030  1.00 13.86          A
      ATOM   1567  CA   CYS A 270      36.539  28.061  20.958  1.00 16.80          A
      ATOM   1568  CB   CYS A 270      37.611  28.634  20.023  1.00 15.97          A
      ATOM   1569  SG   CYS A 270      38.751  29.810  20.780  1.00 20.48          A
      ATOM   1570  C    CYS A 270      35.598  27.175  20.140  1.00 17.50          A
  20  ATOM   1571  O    CYS A 270      34.516  27.604  19.741  1.00 18.38          A
      ATOM   1572  N    ILE A 271      36.022  25.939  19.887  1.00 16.99          A
      ATOM   1573  CA   ILE A 271      35.221  25.004  19.104  1.00 16.66          A
      ATOM   1574  CB   ILE A 271      36.038  23.741  18.778  1.00 16.53          A
      ATOM   1575  CG2  ILE A 271      35.155  22.694  18.102  1.00 16.34          A
  25  ATOM   1576  CG1  ILE A 271      37.222  24.129  17.882  1.00 15.59          A
      ATOM   1577  CD1  ILE A 271      38.239  23.018  17.690  1.00 14.88          A
      ATOM   1578  C    ILE A 271      33.920  24.626  19.809  1.00 16.74          A
      ATOM   1579  O    ILE A 271      32.865  24.576  19.179  1.00 17.12          A
      ATOM   1580  N    ILE A 272      33.990  24.357  21.111  1.00 16.13          A
  30  ATOM   1581  CA   ILE A 272      32.785  24.021  21.862  1.00 18.30          A
      ATOM   1582  CB   ILE A 272      33.097  23.747  23.346  1.00 17.77          A
      ATOM   1583  CG2  ILE A 272      31.796  23.666  24.152  1.00 17.96          A
      ATOM   1584  CG1  ILE A 272      33.877  22.437  23.481  1.00 19.55          A
      ATOM   1585  CD1  ILE A 272      34.446  22.217  24.886  1.00 18.64          A
  35  ATOM   1586  C    ILE A 272      31.824  25.207  21.776  1.00 19.51          A
      ATOM   1587  O    ILE A 272      30.624  25.037  21.554  1.00 20.44          A
      ATOM   1588  N    TYR A 273      32.362  26.409  21.947  1.00 18.52          A
      ATOM   1589  CA   TYR A 273      31.553  27.615  21.881  1.00 20.48          A
      ATOM   1590  CB   TYR A 273      32.418  28.847  22.162  1.00 18.98          A
  40  ATOM   1591  CG   TYR A 273      31.663  30.161  22.125  1.00 20.26          A
      ATOM   1592  CD1  TYR A 273      31.229  30.709  20.916  1.00 20.67          A
      ATOM   1593  CE1  TYR A 273      30.536  31.917  20.880  1.00 20.98          A
      ATOM   1594  CD2  TYR A 273      31.383  30.857  23.302  1.00 19.82          A
      ATOM   1595  CE2  TYR A 273      30.691  32.062  23.280  1.00 20.62          A
  45  ATOM   1596  CZ   TYR A 273      30.271  32.587  22.067  1.00 21.15          A
      ATOM   1597  OH   TYR A 273      29.588  33.776  22.049  1.00 21.86          A
      ATOM   1598  C    TYR A 273      30.902  27.730  20.507  1.00 21.54          A
      ATOM   1599  O    TYR A 273      29.719  28.049  20.401  1.00 22.80          A
      ATOM   1600  N    GLN A 274      31.676  27.454  19.461  1.00 21.05          A
  50  ATOM   1601  CA   GLN A 274      31.176  27.538  18.095  1.00 21.48          A
      ATOM   1602  CB   GLN A 274      32.323  27.341  17.097  1.00 21.41          A
      ATOM   1603  CG   GLN A 274      31.934  27.596  15.645  1.00 23.15          A
      ATOM   1604  CD   GLN A 274      33.131  27.588  14.706  1.00 24.80          A
      ATOM   1605  OE1  GLN A 274      34.276  27.446  15.139  1.00 22.51          A
  55  ATOM   1606  NE2  GLN A 274      32.870  27.750  13.413  1.00 22.96          A
      ATOM   1607  C    GLN A 274      30.076  26.517  17.828  1.00 21.51          A
      ATOM   1608  O    GLN A 274      29.123  26.806  17.108  1.00 20.50          A
      ATOM   1609  N    LEU A 275      30.207  25.324  18.403  1.00 21.44          A
      ATOM   1610  CA   LEU A 275      29.196  24.282  18.208  1.00 20.95          A
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      ATOM   1611   CB   LEU A 275    29.645  22.958  18.846  1.00 19.11       A
      ATOM   1612   CG   LEU A 275    30.775  22.182  18.159  1.00 21.43       A
      ATOM   1613   CD1  LEU A 275    31.118  20.936  18.963  1.00 17.64       A
      ATOM   1614   CD2  LEU A 275    30.342  21.795  16.754  1.00 20.34       A
   5  ATOM   1615   C    LEU A 275    27.860  24.697  18.815  1.00 21.32       A
      ATOM   1616   O    LEU A 275    26.802  24.461  18.229  1.00 19.75       A
      ATOM   1617   N    VAL A 276    27.921  25.322  19.987  1.00 19.10       A
      ATOM   1618   CA   VAL A 276    26.724  25.750  20.702  1.00 22.47       A
      ATOM   1619   CB   VAL A 276    27.011  25.882  22.217  1.00 20.87       A
  10  ATOM   1620   CG1  VAL A 276    25.742  26.291  22.957  1.00 19.68       A
      ATOM   1621   CG2  VAL A 276    27.550  24.558  22.766  1.00 19.43       A
      ATOM   1622   C    VAL A 276    26.127  27.075  20.211  1.00 23.89       A
      ATOM   1623   O    VAL A 276    24.910  27.199  20.070  1.00 24.90       A
      ATOM   1624   N    ALA A 277    26.983  28.062  19.965  1.00 24.56       A
  15  ATOM   1625   CA   ALA A 277    26.533  29.374  19.518  1.00 24.72       A
      ATOM   1626   CB   ALA A 277    27.504  30.444  19.999  1.00 24.36       A
      ATOM   1627   C    ALA A 277    26.378  29.458  18.005  1.00 25.76       A
      ATOM   1628   O    ALA A 277    25.577  30.242  17.502  1.00 26.39       A
      ATOM   1629   N    GLY A 278    27.142  28.651  17.280  1.00 25.13       A
  20  ATOM   1630   CA   GLY A 278    27.062  28.673  15.834  1.00 25.58       A
      ATOM   1631   C    GLY A 278    28.163  29.524  15.231  1.00 26.50       A
      ATOM   1632   O    GLY A 278    28.374  29.510  14.015  1.00 28.17       A
      ATOM   1633   N    LEU A 279    28.866  30.262  16.086  1.00 24.44       A
      ATOM   1634   CA   LEU A 279    29.962  31.130  15.656  1.00 25.21       A
  25  ATOM   1635   CB   LEU A 279    29.468  32.575  15.500  1.00 25.78       A
      ATOM   1636   CG   LEU A 279    28.364  32.899  14.490  1.00 28.17       A
      ATOM   1637   CD1  LEU A 279    27.922  34.344  14.684  1.00 26.60       A
      ATOM   1638   CD2  LEU A 279    28.862  32.670  13.071  1.00 26.52       A
      ATOM   1639   C    LEU A 279    31.093  31.116  16.687  1.00 23.47       A
  30  ATOM   1640   O    LEU A 279    30.848  30.994  17.882  1.00 24.44       A
      ATOM   1641   N    PRO A 280    32.349  31.239  16.236  1.00 23.35       A
      ATOM   1642   CD   PRO A 280    32.831  31.404  14.855  1.00 22.26       A
      ATOM   1643   CA   PRO A 280    33.464  31.239  17.189  1.00 23.81       A
      ATOM   1644   CB   PRO A 280    34.692  31.293  16.282  1.00 23.24       A
  35  ATOM   1645   CG   PRO A 280    34.189  32.020  15.073  1.00 24.89       A
      ATOM   1646   C    PRO A 280    33.353  32.444  18.137  1.00 22.69       A
      ATOM   1647   O    PRO A 280    32.750  33.457  17.788  1.00 22.11       A
      ATOM   1648   N    PRO A 281    33.939  32.344  19.345  1.00 23.06       A
      ATOM   1649   CD   PRO A 281    34.810  31.223  19.734  1.00 21.37       A
  40  ATOM   1650   CA   PRO A 281    33.935  33.375  20.395  1.00 23.67       A
      ATOM   1651   CB   PRO A 281    34.781  32.751  21.509  1.00 24.89       A
      ATOM   1652   CG   PRO A 281    34.749  31.287  21.219  1.00 25.24       A
      ATOM   1653   C    PRO A 281    34.481  34.752  20.017  1.00 23.75       A
      ATOM   1654   O    PRO A 281    33.869  35.781  20.317  1.00 21.02       A
  45  ATOM   1655   N    PHE A 282    35.644  34.763  19.379  1.00 22.17       A
      ATOM   1656   CA   PHE A 282    36.293  36.007  18.998  1.00 23.16       A
      ATOM   1657   CB   PHE A 282    37.765  35.943  19.406  1.00 21.01       A
      ATOM   1658   CG   PHE A 282    37.975  35.482  20.822  1.00 22.66       A
      ATOM   1659   CD1  PHE A 282    37.806  36.361  21.888  1.00 20.06       A
  50  ATOM   1660   CD2  PHE A 282    38.291  34.151  21.093  1.00 20.72       A
      ATOM   1661   CE1  PHE A 282    37.947  35.921  23.206  1.00 22.66       A
      ATOM   1662   CE2  PHE A 282    38.433  33.702  22.405  1.00 20.97       A
      ATOM   1663   CZ   PHE A 282    38.261  34.590  23.466  1.00 19.58       A
      ATOM   1664   C    PHE A 282    36.169  36.263  17.503  1.00 24.39       A
  55  ATOM   1665   O    PHE A 282    36.802  35.585  16.694  1.00 25.80       A
      ATOM   1666   N    ARG A 283    35.355  37.248  17.142  1.00 24.99       A
      ATOM   1667   CA   ARG A 283    35.141  37.594  15.741  1.00 26.33       A
      ATOM   1668   CB   ARG A 283    33.721  37.209  15.316  1.00 28.91       A
      ATOM   1669   CG   ARG A 283    33.293  35.808  15.724  1.00 30.27       A
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      ATOM   1670   CD   ARG A 283      31.904  35.493  15.188  1.00 33.36      A
      ATOM   1671   NE   ARG A 283      30.890  36.392  15.733  1.00 32.76      A
      ATOM   1672   CZ   ARG A 283      30.372  36.287  16.952  1.00 34.79      A
      ATOM   1673   NH1  ARG A 283      30.767  35.317  17.768  1.00 35.77      A
  5   ATOM   1674   NH2  ARG A 283      29.458  37.156  17.359  1.00 36.12      A
      ATOM   1675   C    ARG A 283      35.328  39.096  15.544  1.00 26.47      A
      ATOM   1676   O    ARG A 283      35.029  39.888  16.438  1.00 26.28      A
      ATOM   1677   N    ALA A 284      35.818  39.486  14.373  1.00 26.70      A
      ATOM   1678   CA   ALA A 284      36.033  40.899  14.079  1.00 27.84      A
 10   ATOM   1679   CB   ALA A 284      37.188  41.442  14.914  1.00 26.24      A
      ATOM   1680   C    ALA A 284      36.327  41.077  12.602  1.00 28.35      A
      ATOM   1681   O    ALA A 284      36.560  40.101  11.891  1.00 29.91      A
      ATOM   1682   N    GLY A 285      36.332  42.329  12.153  1.00 29.29      A
      ATOM   1683   CA   GLY A 285      36.577  42.631  10.753  1.00 29.52      A
 15   ATOM   1684   C    GLY A 285      37.893  42.156  10.168  1.00 30.12      A
      ATOM   1685   O    GLY A 285      37.974  41.862   8.976  1.00 30.60      A
      ATOM   1686   N    ASN A 286      38.939  42.097  10.983  1.00 28.49      A
      ATOM   1687   CA   ASN A 286      40.231  41.644  10.489  1.00 26.71      A
      ATOM   1688   CB   ASN A 286      41.050  42.825   9.945  1.00 26.11      A
 20   ATOM   1689   CG   ASN A 286      41.310  43.900  10.990  1.00 27.83      A
      ATOM   1690   OD1  ASN A 286      41.877  43.631  12.049  1.00 27.84      A
      ATOM   1691   ND2  ASN A 286      40.908  45.131  10.685  1.00 25.95      A
      ATOM   1692   C    ASN A 286      40.997  40.924  11.584  1.00 26.03      A
      ATOM   1693   O    ASN A 286      40.540  40.851  12.723  1.00 25.66      A
 25   ATOM   1694   N    GLU A 287      42.162  40.391  11.239  1.00 24.81      A
      ATOM   1695   CA   GLU A 287      42.965  39.662  12.206  1.00 27.59      A
      ATOM   1696   CB   GLU A 287      44.145  38.985  11.510  1.00 30.17      A
      ATOM   1697   CG   GLU A 287      43.776  37.632  10.931  1.00 38.21      A
      ATOM   1698   CD   GLU A 287      44.900  36.998  10.140  1.00 41.86      A
 30   ATOM   1699   OE1  GLU A 287      46.061  37.036  10.608  1.00 43.08      A
      ATOM   1700   OE2  GLU A 287      44.612  36.449   9.052  1.00 45.22      A
      ATOM   1701   C    GLU A 287      43.459  40.485  13.383  1.00 25.05      A
      ATOM   1702   O    GLU A 287      43.382  40.030  14.521  1.00 26.41      A
      ATOM   1703   N    TYR A 288      43.966  41.685  13.122  1.00 23.04      A
 35   ATOM   1704   CA   TYR A 288      44.460  42.528  14.205  1.00 22.34      A
      ATOM   1705   CB   TYR A 288      44.867  43.913  13.691  1.00 21.07      A
      ATOM   1706   CG   TYR A 288      45.275  44.858  14.805  1.00 21.07      A
      ATOM   1707   CD1  TYR A 288      46.533  44.762  15.405  1.00 21.23      A
      ATOM   1708   CE1  TYR A 288      46.891  45.588  16.475  1.00 20.43      A
 40   ATOM   1709   CD2  TYR A 288      44.380  45.809  15.302  1.00 22.32      A
      ATOM   1710   CE2  TYR A 288      44.725  46.637  16.373  1.00 23.28      A
      ATOM   1711   CZ   TYR A 288      45.981  46.518  16.953  1.00 22.96      A
      ATOM   1712   OH   TYR A 288      46.316  47.313  18.024  1.00 23.18      A
      ATOM   1713   C    TYR A 288      43.402  42.698  15.288  1.00 21.38      A
 45   ATOM   1714   O    TYR A 288      43.710  42.616  16.473  1.00 22.09      A
      ATOM   1715   N    LEU A 289      42.159  42.939  14.874  1.00 21.88      A
      ATOM   1716   CA   LEU A 289      41.055  43.130  15.811  1.00 21.98      A
      ATOM   1717   CB   LEU A 289      39.821  43.673  15.078  1.00 22.90      A
      ATOM   1718   CG   LEU A 289      39.896  45.130  14.601  1.00 26.52      A
 50   ATOM   1719   CD1  LEU A 289      38.706  45.436  13.696  1.00 26.55      A
      ATOM   1720   CD2  LEU A 289      39.914  46.071  15.807  1.00 23.13      A
      ATOM   1721   C    LEU A 289      40.686  41.849  16.560  1.00 21.24      A
      ATOM   1722   O    LEU A 289      40.256  41.897  17.715  1.00 20.72      A
      ATOM   1723   N    ILE A 290      40.843  40.708  15.900  1.00 19.62      A
 55   ATOM   1724   CA   ILE A 290      40.538  39.433  16.533  1.00 18.54      A
      ATOM   1725   CB   ILE A 290      40.560  38.281  15.509  1.00 18.52      A
      ATOM   1726   CG2  ILE A 290      40.503  36.934  16.234  1.00 17.63      A
      ATOM   1727   CG1  ILE A 290      39.378  38.429  14.545  1.00 18.88      A
      ATOM   1728   CD1  ILE A 290      39.421  37.483  13.357  1.00 19.81      A
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      ATOM   1729  C     ILE A 290      41.578  39.167  17.618  1.00 19.09       A
      ATOM   1730  O     ILE A 290      41.236  38.788  18.737  1.00 18.20       A
      ATOM   1731  N     PHE A 291      42.849  39.376  17.286  1.00 18.76       A
      ATOM   1732  CA    PHE A 291      43.925  39.156  18.247  1.00 20.75       A
 5    ATOM   1733  CB    PHE A 291      45.286  39.434  17.606  1.00 20.71       A
      ATOM   1734  CG    PHE A 291      45.644  38.480  16.503  1.00 22.92       A
      ATOM   1735  CD1   PHE A 291      45.065  37.214  16.443  1.00 22.98       A
      ATOM   1736  CD2   PHE A 291      46.588  38.830  15.543  1.00 22.91       A
      ATOM   1737  CE1   PHE A 291      45.423  36.310  15.440  1.00 24.51       A
10    ATOM   1738  CE2   PHE A 291      46.954  37.931  14.535  1.00 25.54       A
      ATOM   1739  CZ    PHE A 291      46.370  36.670  14.485  1.00 23.29       A
      ATOM   1740  C     PHE A 291      43.739  40.061  19.451  1.00 21.72       A
      ATOM   1741  O     PHE A 291      43.992  39.671  20.593  1.00 22.32       A
      ATOM   1742  N     GLN A 292      43.284  41.275  19.178  1.00 23.27       A
15    ATOM   1743  CA    GLN A 292      43.055  42.264  20.216  1.00 24.01       A
      ATOM   1744  CB    GLN A 292      42.574  43.559  19.562  1.00 25.77       A
      ATOM   1745  CG    GLN A 292      42.577  44.773  20.447  1.00 28.45       A
      ATOM   1746  CD    GLN A 292      42.469  46.057  19.638  1.00 29.83       A
      ATOM   1747  OE1   GLN A 292      41.520  46.244  18.872  1.00 27.16       A
20    ATOM   1748  NE2   GLN A 292      43.449  46.944  19.799  1.00 27.61       A
      ATOM   1749  C     GLN A 292      42.018  41.733  21.204  1.00 22.97       A
      ATOM   1750  O     GLN A 292      42.200  41.832  22.415  1.00 21.64       A
      ATOM   1751  N     LYS A 293      40.937  41.154  20.687  1.00 21.82       A
      ATOM   1752  CA    LYS A 293      39.895  40.612  21.558  1.00 22.18       A
25    ATOM   1753  CB    LYS A 293      38.664  40.223  20.740  1.00 22.69       A
      ATOM   1754  CG    LYS A 293      37.919  41.407  20.153  1.00 25.78       A
      ATOM   1755  CD    LYS A 293      36.651  40.961  19.429  1.00 27.88       A
      ATOM   1756  CE    LYS A 293      35.887  42.161  18.926  1.00 30.85       A
      ATOM   1757  NZ    LYS A 293      34.612  41.750  18.214  1.00 32.98       A
30    ATOM   1758  C     LYS A 293      40.398  39.398  22.343  1.00 21.20       A
      ATOM   1759  O     LYS A 293      40.041  39.204  23.509  1.00 22.01       A
      ATOM   1760  N     ILE A 294      41.226  38.583  21.702  1.00 19.91       A
      ATOM   1761  CA    ILE A 294      41.774  37.394  22.347  1.00 20.28       A
      ATOM   1762  CB    ILE A 294      42.631  36.575  21.349  1.00 18.98       A
35    ATOM   1763  CG2   ILE A 294      43.481  35.550  22.098  1.00 17.70       A
      ATOM   1764  CG1   ILE A 294      41.716  35.897  20.318  1.00 17.93       A
      ATOM   1765  CD1   ILE A 294      42.467  35.237  19.178  1.00 16.21       A
      ATOM   1766  C     ILE A 294      42.618  37.727  23.587  1.00 21.94       A
      ATOM   1767  O     ILE A 294      42.366  37.199  24.673  1.00 20.86       A
40    ATOM   1768  N     ILE A 295      43.610  38.600  23.439  1.00 21.88       A
      ATOM   1769  CA    ILE A 295      44.461  38.934  24.582  1.00 24.25       A
      ATOM   1770  CB    ILE A 295      45.668  39.805  24.175  1.00 23.93       A
      ATOM   1771  CG2   ILE A 295      46.514  39.066  23.140  1.00 24.61       A
      ATOM   1772  CG1   ILE A 295      45.189  41.151  23.637  1.00 24.58       A
45    ATOM   1773  CD1   ILE A 295      46.317  42.149  23.433  1.00 26.69       A
      ATOM   1774  C     ILE A 295      43.720  39.636  25.717  1.00 24.80       A
      ATOM   1775  O     ILE A 295      44.214  39.687  26.842  1.00 24.76       A
      ATOM   1776  N     LYS A 296      42.539  40.173  25.425  1.00 25.33       A
      ATOM   1777  CA    LYS A 296      41.743  40.853  26.444  1.00 26.80       A
50    ATOM   1778  CB    LYS A 296      41.178  42.170  25.894  1.00 27.39       A
      ATOM   1779  CG    LYS A 296      42.240  43.141  25.413  1.00 31.79       A
      ATOM   1780  CD    LYS A 296      41.634  44.410  24.826  1.00 35.56       A
      ATOM   1781  CE    LYS A 296      41.009  45.283  25.900  1.00 39.29       A
      ATOM   1782  NZ    LYS A 296      40.564  46.603  25.357  1.00 41.72       A
55    ATOM   1783  C     LYS A 296      40.593  39.958  26.893  1.00 25.50       A
      ATOM   1784  O     LYS A 296      39.770  40.361  27.713  1.00 24.02       A
      ATOM   1785  N     LEU A 297      40.550  38.742  26.349  1.00 25.67       A
      ATOM   1786  CA    LEU A 297      39.500  37.777  26.666  1.00 25.16       A
      ATOM   1787  CB    LEU A 297      39.632  37.285  28.111  1.00 24.80       A
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ATOM	1788	CG	LEU A 297	38.766	36.068	28.460	1.00 26.43	A
ATOM	1789	CD1	LEU A 297	39.238	34.852	27.646	1.00 26.70	A
ATOM	1790	CD2	LEU A 297	38.856	35.777	29.951	1.00 24.84	A
ATOM	1791	C	LEU A 297	38.151	38.459	26.467	1.00 25.11	A
ATOM	1792	O	LEU A 297	37.261	38.378	27.309	1.00 25.28	A
ATOM	1793	N	GLU A 298	38.007	39.127	25.331	1.00 24.98	A
ATOM	1794	CA	GLU A 298	36.786	39.847	25.023	1.00 25.31	A
ATOM	1795	CB	GLU A 298	37.143	41.139	24.291	1.00 27.13	A
ATOM	1796	CG	GLU A 298	35.991	42.092	24.108	1.00 31.28	A
ATOM	1797	CD	GLU A 298	36.419	43.362	23.410	1.00 34.40	A
ATOM	1798	OE1	GLU A 298	37.348	44.027	23.918	1.00 35.90	A
ATOM	1799	OE2	GLU A 298	35.832	43.693	22.359	1.00 36.16	A
ATOM	1800	C	GLU A 298	35.766	39.057	24.207	1.00 23.79	A
ATOM	1801	O	GLU A 298	35.832	39.017	22.979	1.00 24.35	A
ATOM	1802	N	TYR A 299	34.825	38.427	24.902	1.00 23.45	A
ATOM	1803	CA	TYR A 299	33.760	37.663	24.265	1.00 23.98	A
ATOM	1804	CB	TYR A 299	34.264	36.304	23.755	1.00 20.13	A
ATOM	1805	CG	TYR A 299	34.348	35.233	24.828	1.00 21.17	A
ATOM	1806	CD1	TYR A 299	35.336	35.279	25.810	1.00 19.32	A
ATOM	1807	CE1	TYR A 299	35.389	34.332	26.826	1.00 19.30	A
ATOM	1808	CD2	TYR A 299	33.410	34.201	24.888	1.00 18.96	A
ATOM	1809	CE2	TYR A 299	33.456	33.243	25.907	1.00 19.41	A
ATOM	1810	CZ	TYR A 299	34.449	33.321	26.870	1.00 18.79	A
ATOM	1811	OH	TYR A 299	34.511	32.401	27.881	1.00 18.77	A
ATOM	1812	C	TYR A 299	32.699	37.437	25.331	1.00 25.20	A
ATOM	1813	O	TYR A 299	32.942	37.681	26.506	1.00 26.46	A
ATOM	1814	N	ASP A 300	31.522	36.981	24.927	1.00 26.94	A
ATOM	1815	CA	ASP A 300	30.467	36.710	25.891	1.00 30.60	A
ATOM	1816	CB	ASP A 300	29.665	37.981	26.179	1.00 35.86	A
ATOM	1817	CG	ASP A 300	29.228	38.687	24.923	1.00 42.04	A
ATOM	1818	OD1	ASP A 300	28.450	38.088	24.149	1.00 45.98	A
ATOM	1819	OD2	ASP A 300	29.666	39.840	24.707	1.00 45.69	A
ATOM	1820	C	ASP A 300	29.564	35.608	25.363	1.00 29.26	A
ATOM	1821	O	ASP A 300	29.590	35.299	24.172	1.00 28.64	A
ATOM	1822	N	PHE A 301	28.778	35.011	26.253	1.00 28.96	A
ATOM	1823	CA	PHE A 301	27.884	33.924	25.871	1.00 30.48	A
ATOM	1824	CB	PHE A 301	27.818	32.854	26.968	1.00 29.17	A
ATOM	1825	CG	PHE A 301	29.147	32.279	27.356	1.00 29.29	A
ATOM	1826	CD1	PHE A 301	29.978	32.949	28.245	1.00 27.31	A
ATOM	1827	CD2	PHE A 301	29.560	31.050	26.845	1.00 27.89	A
ATOM	1828	CE1	PHE A 301	31.205	32.403	28.625	1.00 28.83	A
ATOM	1829	CE2	PHE A 301	30.781	30.498	27.217	1.00 28.05	A
ATOM	1830	CZ	PHE A 301	31.605	31.175	28.110	1.00 28.27	A
ATOM	1831	C	PHE A 301	26.459	34.384	25.619	1.00 32.20	A
ATOM	1832	O	PHE A 301	25.946	35.261	26.317	1.00 32.36	A
ATOM	1833	N	PRO A 302	25.798	33.804	24.607	1.00 33.29	A
ATOM	1834	CD	PRO A 302	26.313	32.943	23.529	1.00 34.04	A
ATOM	1835	CA	PRO A 302	24.415	34.199	24.341	1.00 35.24	A
ATOM	1836	CB	PRO A 302	24.144	33.608	22.959	1.00 34.01	A
ATOM	1837	CG	PRO A 302	25.041	32.413	22.921	1.00 35.48	A
ATOM	1838	C	PRO A 302	23.567	33.561	25.444	1.00 37.39	A
ATOM	1839	O	PRO A 302	23.935	32.518	25.986	1.00 38.49	A
ATOM	1840	N	ALA A 303	22.447	34.188	25.783	1.00 39.36	A
ATOM	1841	CA	ALA A 303	21.572	33.692	26.843	1.00 40.65	A
ATOM	1842	CB	ALA A 303	20.280	34.506	26.862	1.00 41.66	A
ATOM	1843	C	ALA A 303	21.238	32.197	26.814	1.00 41.25	A
ATOM	1844	O	ALA A 303	21.253	31.537	27.854	1.00 43.16	A
ATOM	1845	N	ALA A 304	20.945	31.665	25.631	1.00 41.04	A
ATOM	1846	CA	ALA A 304	20.569	30.258	25.480	1.00 40.66	A

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      ATOM   1847  CB   ALA A 304      20.121  30.004  24.040  1.00 41.36       A
      ATOM   1848  C    ALA A 304      21.628  29.223  25.876  1.00 39.61       A
      ATOM   1849  O    ALA A 304      21.298  28.156  26.395  1.00 40.61       A
      ATOM   1850  N    PHE A 305      22.891  29.543  25.617  1.00 36.21       A
   5  ATOM   1851  CA   PHE A 305      24.022  28.662  25.909  1.00 32.08       A
      ATOM   1852  CB   PHE A 305      25.259  29.519  26.187  1.00 29.46       A
      ATOM   1853  CG   PHE A 305      26.536  28.917  25.690  1.00 28.15       A
      ATOM   1854  CD1  PHE A 305      27.146  27.875  26.377  1.00 26.20       A
      ATOM   1855  CD2  PHE A 305      27.127  29.386  24.521  1.00 27.05       A
  10  ATOM   1856  CE1  PHE A 305      28.330  27.308  25.908  1.00 26.92       A
      ATOM   1857  CE2  PHE A 305      28.312  28.826  24.042  1.00 26.62       A
      ATOM   1858  CZ   PHE A 305      28.914  27.786  24.737  1.00 26.61       A
      ATOM   1859  C    PHE A 305      23.811  27.664  27.057  1.00 30.09       A
      ATOM   1860  O    PHE A 305      23.518  28.051  28.187  1.00 31.51       A
  15  ATOM   1861  N    PHE A 306      23.964  26.378  26.758  1.00 27.01       A
      ATOM   1862  CA   PHE A 306      23.801  25.334  27.769  1.00 26.30       A
      ATOM   1863  CB   PHE A 306      24.157  23.970  27.170  1.00 25.03       A
      ATOM   1864  CG   PHE A 306      23.548  23.725  25.815  1.00 27.24       A
      ATOM   1865  CD1  PHE A 306      22.170  23.831  25.622  1.00 28.40       A
  20  ATOM   1866  CD2  PHE A 306      24.430  23.386  24.728  1.00 27.84       A
      ATOM   1867  CE1  PHE A 306      21.601  23.603  24.365  1.00 28.05       A
      ATOM   1868  CE2  PHE A 306      23.792  23.155  23.465  1.00 28.31       A
      ATOM   1869  CZ   PHE A 306      22.415  23.263  23.283  1.00 28.00       A
      ATOM   1870  C    PHE A 306      24.711  25.652  28.961  1.00 26.23       A
  25  ATOM   1871  O    PHE A 306      25.927  25.775  28.811  1.00 25.59       A
      ATOM   1872  N    PRO A 307      24.125  25.796  30.163  1.00 26.67       A
      ATOM   1873  CD   PRO A 307      22.685  25.625  30.430  1.00 27.95       A
      ATOM   1874  CA   PRO A 307      24.842  26.110  31.405  1.00 26.59       A
      ATOM   1875  CB   PRO A 307      23.795  25.832  32.481  1.00 26.14       A
  30  ATOM   1876  CG   PRO A 307      22.531  26.250  31.803  1.00 27.86       A
      ATOM   1877  C    PRO A 307      26.145  25.355  31.659  1.00 25.58       A
      ATOM   1878  O    PRO A 307      27.189  25.964  31.900  1.00 22.65       A
      ATOM   1879  N    LYS A 308      26.085  24.031  31.620  1.00 24.46       A
      ATOM   1880  CA   LYS A 308      27.274  23.232  31.867  1.00 23.91       A
  35  ATOM   1881  CB   LYS A 308      26.887  21.760  32.024  1.00 23.25       A
      ATOM   1882  CG   LYS A 308      26.062  21.532  33.285  1.00 28.49       A
      ATOM   1883  CD   LYS A 308      25.618  20.093  33.466  1.00 30.17       A
      ATOM   1884  CE   LYS A 308      24.760  19.973  34.722  1.00 33.12       A
      ATOM   1885  NZ   LYS A 308      24.122  18.636  34.860  1.00 34.13       A
  40  ATOM   1886  C    LYS A 308      28.314  23.426  30.769  1.00 22.84       A
      ATOM   1887  O    LYS A 308      29.514  23.411  31.042  1.00 22.46       A
      ATOM   1888  N    ALA A 309      27.861  23.621  29.534  1.00 21.59       A
      ATOM   1889  CA   ALA A 309      28.792  23.848  28.432  1.00 20.02       A
      ATOM   1890  CB   ALA A 309      28.056  23.856  27.106  1.00 18.80       A
  45  ATOM   1891  C    ALA A 309      29.481  25.191  28.662  1.00 21.41       A
      ATOM   1892  O    ALA A 309      30.680  25.335  28.427  1.00 21.39       A
      ATOM   1893  N    ARG A 310      28.717  26.179  29.121  1.00 21.39       A
      ATOM   1894  CA   ARG A 310      29.290  27.494  29.388  1.00 22.02       A
      ATOM   1895  CB   ARG A 310      28.213  28.479  29.854  1.00 22.39       A
  50  ATOM   1896  CG   ARG A 310      28.806  29.756  30.436  1.00 25.30       A
      ATOM   1897  CD   ARG A 310      27.780  30.852  30.664  1.00 28.33       A
      ATOM   1898  NE   ARG A 310      28.420  32.039  31.230  1.00 30.18       A
      ATOM   1899  CZ   ARG A 310      27.901  33.263  31.203  1.00 32.07       A
      ATOM   1900  NH1  ARG A 310      26.719  33.477  30.634  1.00 31.19       A
  55  ATOM   1901  NH2  ARG A 310      28.567  34.277  31.742  1.00 30.49       A
      ATOM   1902  C    ARG A 310      30.376  27.388  30.458  1.00 21.65       A
      ATOM   1903  O    ARG A 310      31.464  27.949  30.311  1.00 20.36       A
      ATOM   1904  N    ASP A 311      30.074  26.677  31.541  1.00 19.57       A
      ATOM   1905  CA   ASP A 311      31.043  26.512  32.615  1.00 20.18       A
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	ATOM	1906	CB	ASP A 311	30.460	25.649	33.739	1.00 20.39	A
	ATOM	1907	CG	ASP A 311	31.439	25.446	34.881	1.00 23.35	A
	ATOM	1908	OD1	ASP A 311	32.158	24.428	34.885	1.00 24.91	A
	ATOM	1909	OD2	ASP A 311	31.500	26.312	35.776	1.00 26.96	A
5	ATOM	1910	C	ASP A 311	32.322	25.877	32.073	1.00 19.73	A
	ATOM	1911	O	ASP A 311	33.422	26.289	32.439	1.00 19.30	A
	ATOM	1912	N	LEU A 312	32.179	24.891	31.188	1.00 16.32	A
	ATOM	1913	CA	LEU A 312	33.349	24.226	30.611	1.00 16.66	A
	ATOM	1914	CB	LEU A 312	32.927	23.035	29.744	1.00 16.12	A
10	ATOM	1915	CG	LEU A 312	34.050	22.320	28.974	1.00 14.73	A
	ATOM	1916	CD1	LEU A 312	35.192	21.935	29.912	1.00 14.56	A
	ATOM	1917	CD2	LEU A 312	33.477	21.084	28.289	1.00 14.22	A
	ATOM	1918	C	LEU A 312	34.181	25.189	29.774	1.00 16.61	A
	ATOM	1919	O	LEU A 312	35.402	25.241	29.910	1.00 16.20	A
15	ATOM	1920	N	VAL A 313	33.515	25.949	28.908	1.00 16.20	A
	ATOM	1921	CA	VAL A 313	34.207	26.907	28.058	1.00 15.37	A
	ATOM	1922	CB	VAL A 313	33.216	27.648	27.130	1.00 16.42	A
	ATOM	1923	CG1	VAL A 313	33.915	28.796	26.426	1.00 16.93	A
	ATOM	1924	CG2	VAL A 313	32.644	26.672	26.103	1.00 17.88	A
20	ATOM	1925	C	VAL A 313	34.960	27.923	28.911	1.00 17.39	A
	ATOM	1926	O	VAL A 313	36.093	28.294	28.591	1.00 18.00	A
	ATOM	1927	N	GLU A 314	34.342	28.364	30.004	1.00 17.61	A
	ATOM	1928	CA	GLU A 314	34.986	29.331	30.885	1.00 20.43	A
	ATOM	1929	CB	GLU A 314	34.009	29.816	31.959	1.00 22.14	A
25	ATOM	1930	CG	GLU A 314	32.800	30.550	31.396	1.00 26.52	A
	ATOM	1931	CD	GLU A 314	31.852	31.025	32.478	1.00 31.26	A
	ATOM	1932	OE1	GLU A 314	31.580	30.246	33.417	1.00 33.48	A
	ATOM	1933	OE2	GLU A 314	31.370	32.173	32.387	1.00 34.81	A
	ATOM	1934	C	GLU A 314	36.217	28.721	31.539	1.00 19.15	A
30	ATOM	1935	O	GLU A 314	37.134	29.433	31.934	1.00 21.47	A
	ATOM	1936	N	LYS A 315	36.245	27.400	31.651	1.00 19.51	A
	ATOM	1937	CA	LYS A 315	37.394	26.749	32.258	1.00 19.17	A
	ATOM	1938	CB	LYS A 315	36.946	25.514	33.043	1.00 18.84	A
	ATOM	1939	CG	LYS A 315	36.280	25.885	34.368	1.00 19.62	A
35	ATOM	1940	CD	LYS A 315	35.653	24.696	35.073	1.00 19.22	A
	ATOM	1941	CE	LYS A 315	35.070	25.095	36.427	1.00 21.00	A
	ATOM	1942	NZ	LYS A 315	36.119	25.552	37.381	1.00 19.53	A
	ATOM	1943	C	LYS A 315	38.452	26.393	31.218	1.00 18.96	A
	ATOM	1944	O	LYS A 315	39.511	25.873	31.561	1.00 19.85	A
40	ATOM	1945	N	LEU A 316	38.164	26.691	29.950	1.00 17.08	A
	ATOM	1946	CA	LEU A 316	39.102	26.429	28.854	1.00 16.41	A
	ATOM	1947	CB	LEU A 316	38.414	25.636	27.738	1.00 13.81	A
	ATOM	1948	CG	LEU A 316	38.028	24.201	28.115	1.00 14.39	A
	ATOM	1949	CD1	LEU A 316	37.139	23.597	27.031	1.00 12.38	A
45	ATOM	1950	CD2	LEU A 316	39.302	23.373	28.309	1.00 12.77	A
	ATOM	1951	C	LEU A 316	39.652	27.743	28.290	1.00 17.12	A
	ATOM	1952	O	LEU A 316	40.851	27.860	28.023	1.00 16.53	A
	ATOM	1953	N	LEU A 317	38.780	28.729	28.105	1.00 16.27	A
	ATOM	1954	CA	LEU A 317	39.228	30.022	27.596	1.00 17.52	A
50	ATOM	1955	CB	LEU A 317	38.083	30.752	26.887	1.00 16.37	A
	ATOM	1956	CG	LEU A 317	37.448	29.973	25.727	1.00 18.81	A
	ATOM	1957	CD1	LEU A 317	36.415	30.851	25.018	1.00 16.47	A
	ATOM	1958	CD2	LEU A 317	38.528	29.526	24.741	1.00 17.87	A
	ATOM	1959	C	LEU A 317	39.745	30.841	28.774	1.00 18.27	A
55	ATOM	1960	O	LEU A 317	39.078	31.753	29.273	1.00 18.58	A
	ATOM	1961	N	VAL A 318	40.937	30.475	29.229	1.00 18.02	A
	ATOM	1962	CA	VAL A 318	41.593	31.141	30.342	1.00 18.85	A
	ATOM	1963	CB	VAL A 318	41.846	30.153	31.500	1.00 19.91	A
	ATOM	1964	CG1	VAL A 318	42.590	30.848	32.634	1.00 20.01	A

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      ATOM   1965   CG2  VAL A 318      40.520  29.584  31.990  1.00 19.44       A
      ATOM   1966   C    VAL A 318      42.923  31.657  29.811  1.00 19.67       A
      ATOM   1967   O    VAL A 318      43.690  30.902  29.208  1.00 18.26       A
      ATOM   1968   N    LEU A 319      43.197  32.939  30.028  1.00 20.07       A
  5   ATOM   1969   CA   LEU A 319      44.436  33.533  29.538  1.00 20.98       A
      ATOM   1970   CB   LEU A 319      44.521  35.002  29.968  1.00 21.64       A
      ATOM   1971   CG   LEU A 319      43.418  35.908  29.408  1.00 24.38       A
      ATOM   1972   CD1  LEU A 319      43.606  37.332  29.935  1.00 23.28       A
      ATOM   1973   CD2  LEU A 319      43.453  35.887  27.875  1.00 24.33       A
 10   ATOM   1974   C    LEU A 319      45.680  32.774  29.994  1.00 20.38       A
      ATOM   1975   O    LEU A 319      46.568  32.496  29.192  1.00 21.34       A
      ATOM   1976   N    ASP A 320      45.742  32.440  31.280  1.00 20.22       A
      ATOM   1977   CA   ASP A 320      46.879  31.707  31.833  1.00 20.90       A
      ATOM   1978   CB   ASP A 320      46.842  31.760  33.365  1.00 20.76       A
 15   ATOM   1979   CG   ASP A 320      48.049  31.102  34.004  1.00 21.51       A
      ATOM   1980   OD1  ASP A 320      48.669  30.226  33.367  1.00 23.46       A
      ATOM   1981   OD2  ASP A 320      48.371  31.450  35.159  1.00 23.89       A
      ATOM   1982   C    ASP A 320      46.814  30.247  31.367  1.00 20.06       A
      ATOM   1983   O    ASP A 320      45.988  29.476  31.840  1.00 20.54       A
 20   ATOM   1984   N    ALA A 321      47.700  29.876  30.451  1.00 20.68       A
      ATOM   1985   CA   ALA A 321      47.733  28.522  29.903  1.00 22.04       A
      ATOM   1986   CB   ALA A 321      48.860  28.411  28.881  1.00 20.75       A
      ATOM   1987   C    ALA A 321      47.858  27.400  30.940  1.00 21.62       A
      ATOM   1988   O    ALA A 321      47.482  26.259  30.665  1.00 21.99       A
 25   ATOM   1989   N    THR A 322      48.372  27.715  32.127  1.00 20.89       A
      ATOM   1990   CA   THR A 322      48.531  26.698  33.167  1.00 20.82       A
      ATOM   1991   CB   THR A 322      49.670  27.051  34.146  1.00 19.47       A
      ATOM   1992   OG1  THR A 322      49.341  28.253  34.848  1.00 20.19       A
      ATOM   1993   CG2  THR A 322      50.981  27.249  33.394  1.00 21.59       A
 30   ATOM   1994   C    THR A 322      47.264  26.498  33.983  1.00 19.55       A
      ATOM   1995   O    THR A 322      47.235  25.673  34.894  1.00 21.13       A
      ATOM   1996   N    LYS A 323      46.216  27.248  33.661  1.00 19.33       A
      ATOM   1997   CA   LYS A 323      44.962  27.122  34.392  1.00 21.20       A
      ATOM   1998   CB   LYS A 323      44.580  28.460  35.030  1.00 23.75       A
 35   ATOM   1999   CG   LYS A 323      45.562  28.933  36.084  1.00 28.45       A
      ATOM   2000   CD   LYS A 323      45.055  30.177  36.799  1.00 33.76       A
      ATOM   2001   CE   LYS A 323      46.087  30.678  37.802  1.00 36.15       A
      ATOM   2002   NZ   LYS A 323      46.532  29.569  38.693  1.00 37.34       A
      ATOM   2003   C    LYS A 323      43.806  26.614  33.539  1.00 20.68       A
 40   ATOM   2004   O    LYS A 323      42.649  26.757  33.915  1.00 20.42       A
      ATOM   2005   N    ARG A 324      44.114  26.019  32.392  1.00 19.97       A
      ATOM   2006   CA   ARG A 324      43.060  25.494  31.531  1.00 17.98       A
      ATOM   2007   CB   ARG A 324      43.461  25.609  30.061  1.00 15.95       A
      ATOM   2008   CG   ARG A 324      43.534  27.050  29.603  1.00 17.34       A
 45   ATOM   2009   CD   ARG A 324      43.996  27.194  28.172  1.00 19.80       A
      ATOM   2010   NE   ARG A 324      44.438  28.565  27.944  1.00 16.93       A
      ATOM   2011   CZ   ARG A 324      45.410  28.908  27.108  1.00 19.88       A
      ATOM   2012   NH1  ARG A 324      46.045  27.978  26.398  1.00 14.58       A
      ATOM   2013   NH2  ARG A 324      45.774  30.181  27.015  1.00 16.51       A
 50   ATOM   2014   C    ARG A 324      42.762  24.046  31.883  1.00 18.32       A
      ATOM   2015   O    ARG A 324      43.673  23.222  32.006  1.00 18.20       A
      ATOM   2016   N    LEU A 325      41.479  23.748  32.055  1.00 18.32       A
      ATOM   2017   CA   LEU A 325      41.050  22.403  32.395  1.00 17.79       A
      ATOM   2018   CB   LEU A 325      39.523  22.335  32.425  1.00 17.03       A
 55   ATOM   2019   CG   LEU A 325      38.896  21.125  33.116  1.00 15.91       A
      ATOM   2020   CD1  LEU A 325      39.392  21.048  34.557  1.00 15.93       A
      ATOM   2021   CD2  LEU A 325      37.375  21.255  33.084  1.00 16.56       A
      ATOM   2022   C    LEU A 325      41.599  21.433  31.356  1.00 18.68       A
      ATOM   2023   O    LEU A 325      41.347  21.586  30.157  1.00 18.28       A
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	ATOM	2024	N	GLY A 326	42.354	20.439	31.821	1.00	18.18	A
	ATOM	2025	CA	GLY A 326	42.931	19.462	30.915	1.00	16.36	A
	ATOM	2026	C	GLY A 326	44.443	19.558	30.807	1.00	19.15	A
	ATOM	2027	O	GLY A 326	45.093	18.592	30.404	1.00	19.52	A
5	ATOM	2028	N	CYS A 327	45.016	20.708	31.161	1.00	18.16	A
	ATOM	2029	CA	CYS A 327	46.463	20.867	31.075	1.00	19.30	A
	ATOM	2030	CB	CYS A 327	46.856	22.350	31.058	1.00	20.22	A
	ATOM	2031	SG	CYS A 327	46.782	23.200	32.649	1.00	21.97	A
	ATOM	2032	C	CYS A 327	47.169	20.157	32.228	1.00	20.22	A
10	ATOM	2033	O	CYS A 327	46.561	19.828	33.246	1.00	17.92	A
	ATOM	2034	N	GLU A 328	48.463	19.933	32.053	1.00	20.51	A
	ATOM	2035	CA	GLU A 328	49.274	19.244	33.042	1.00	23.34	A
	ATOM	2036	CB	GLU A 328	50.710	19.139	32.507	1.00	28.68	A
	ATOM	2037	CG	GLU A 328	50.754	18.367	31.175	1.00	38.24	A
15	ATOM	2038	CD	GLU A 328	52.067	18.500	30.414	1.00	43.23	A
	ATOM	2039	OE1	GLU A 328	52.535	19.643	30.218	1.00	46.22	A
	ATOM	2040	OE2	GLU A 328	52.618	17.459	29.991	1.00	44.90	A
	ATOM	2041	C	GLU A 328	49.234	19.876	34.435	1.00	22.11	A
	ATOM	2042	O	GLU A 328	49.147	19.161	35.437	1.00	20.27	A
20	ATOM	2043	N	GLU A 329	49.276	21.204	34.506	1.00	18.40	A
	ATOM	2044	CA	GLU A 329	49.248	21.875	35.801	1.00	20.13	A
	ATOM	2045	CB	GLU A 329	49.587	23.363	35.657	1.00	20.36	A
	ATOM	2046	CG	GLU A 329	51.014	23.651	35.190	1.00	24.05	A
	ATOM	2047	CD	GLU A 329	51.191	23.518	33.688	1.00	25.93	A
25	ATOM	2048	OE1	GLU A 329	50.213	23.154	32.995	1.00	26.61	A
	ATOM	2049	OE2	GLU A 329	52.311	23.781	33.198	1.00	27.19	A
	ATOM	2050	C	GLU A 329	47.890	21.718	36.480	1.00	19.36	A
	ATOM	2051	O	GLU A 329	47.775	21.879	37.694	1.00	18.74	A
	ATOM	2052	N	MET A 330	46.863	21.415	35.691	1.00	17.28	A
30	ATOM	2053	CA	MET A 330	45.520	21.220	36.229	1.00	16.38	A
	ATOM	2054	CB	MET A 330	44.474	21.833	35.294	1.00	17.65	A
	ATOM	2055	CG	MET A 330	44.460	23.365	35.311	1.00	22.95	A
	ATOM	2056	SD	MET A 330	44.186	24.026	36.979	1.00	26.78	A
	ATOM	2057	CE	MET A 330	42.435	23.712	37.186	1.00	24.69	A
35	ATOM	2058	C	MET A 330	45.257	19.730	36.422	1.00	14.30	A
	ATOM	2059	O	MET A 330	44.127	19.304	36.629	1.00	15.39	A
	ATOM	2060	N	GLU A 331	46.327	18.949	36.346	1.00	15.60	A
	ATOM	2061	CA	GLU A 331	46.289	17.501	36.531	1.00	17.08	A
	ATOM	2062	CB	GLU A 331	45.607	17.155	37.862	1.00	17.00	A
40	ATOM	2063	CG	GLU A 331	46.070	18.027	39.038	1.00	17.46	A
	ATOM	2064	CD	GLU A 331	47.591	18.179	39.145	1.00	20.16	A
	ATOM	2065	OE1	GLU A 331	48.034	19.073	39.896	1.00	21.39	A
	ATOM	2066	OE2	GLU A 331	48.345	17.420	38.500	1.00	18.87	A
	ATOM	2067	C	GLU A 331	45.697	16.658	35.398	1.00	17.80	A
45	ATOM	2068	O	GLU A 331	45.107	15.602	35.636	1.00	20.40	A
	ATOM	2069	N	GLY A 332	45.844	17.133	34.167	1.00	16.23	A
	ATOM	2070	CA	GLY A 332	45.420	16.353	33.015	1.00	14.10	A
	ATOM	2071	C	GLY A 332	43.982	16.154	32.596	1.00	13.54	A
	ATOM	2072	O	GLY A 332	43.063	16.864	33.017	1.00	11.96	A
50	ATOM	2073	N	TYR A 333	43.804	15.141	31.750	1.00	14.37	A
	ATOM	2074	CA	TYR A 333	42.510	14.806	31.182	1.00	13.56	A
	ATOM	2075	CB	TYR A 333	42.722	13.892	29.968	1.00	15.00	A
	ATOM	2076	CG	TYR A 333	43.153	14.683	28.752	1.00	16.46	A
	ATOM	2077	CD1	TYR A 333	42.206	15.172	27.849	1.00	15.29	A
55	ATOM	2078	CE1	TYR A 333	42.573	16.002	26.794	1.00	13.42	A
	ATOM	2079	CD2	TYR A 333	44.490	15.039	28.561	1.00	14.91	A
	ATOM	2080	CE2	TYR A 333	44.872	15.877	27.499	1.00	14.87	A
	ATOM	2081	CZ	TYR A 333	43.902	16.353	26.626	1.00	15.61	A
	ATOM	2082	OH	TYR A 333	44.244	17.197	25.599	1.00	17.29	A

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      ATOM   2083   C    TYR A 333    41.470  14.230  32.127  1.00 15.23        A
      ATOM   2084   O    TYR A 333    40.278  14.323  31.846  1.00 16.63        A
      ATOM   2085   N    GLY A 334    41.907  13.650  33.244  1.00 15.50        A
      ATOM   2086   CA   GLY A 334    40.957  13.100  34.202  1.00 15.07        A
  5   ATOM   2087   C    GLY A 334    39.925  14.146  34.616  1.00 16.40        A
      ATOM   2088   O    GLY A 334    38.724  13.946  34.433  1.00 15.05        A
      ATOM   2089   N    PRO A 335    40.366  15.278  35.184  1.00 14.96        A
      ATOM   2090   CD   PRO A 335    41.727  15.531  35.689  1.00 15.88        A
      ATOM   2091   CA   PRO A 335    39.444  16.339  35.606  1.00 15.29        A
 10   ATOM   2092   CB   PRO A 335    40.383  17.397  36.178  1.00 13.19        A
      ATOM   2093   CG   PRO A 335    41.485  16.569  36.758  1.00 13.81        A
      ATOM   2094   C    PRO A 335    38.594  16.877  34.448  1.00 15.84        A
      ATOM   2095   O    PRO A 335    37.423  17.204  34.631  1.00 14.84        A
      ATOM   2096   N    LEU A 336    39.184  16.971  33.257  1.00 16.12        A
 15   ATOM   2097   CA   LEU A 336    38.450  17.465  32.094  1.00 15.52        A
      ATOM   2098   CB   LEU A 336    39.396  17.653  30.898  1.00 14.39        A
      ATOM   2099   CG   LEU A 336    38.770  17.991  29.538  1.00 15.46        A
      ATOM   2100   CD1  LEU A 336    37.836  19.182  29.662  1.00 11.25        A
      ATOM   2101   CD2  LEU A 336    39.884  18.285  28.528  1.00 14.11        A
 20   ATOM   2102   C    LEU A 336    37.321  16.508  31.714  1.00 16.28        A
      ATOM   2103   O    LEU A 336    36.176  16.921  31.540  1.00 15.51        A
      ATOM   2104   N    LYS A 337    37.640  15.225  31.592  1.00 17.22        A
      ATOM   2105   CA   LYS A 337    36.624  14.243  31.235  1.00 17.39        A
      ATOM   2106   CB   LYS A 337    37.293  12.900  30.921  1.00 17.68        A
 25   ATOM   2107   CG   LYS A 337    38.170  12.994  29.676  1.00 22.31        A
      ATOM   2108   CD   LYS A 337    39.213  11.892  29.592  1.00 24.60        A
      ATOM   2109   CE   LYS A 337    38.620  10.560  29.189  1.00 24.76        A
      ATOM   2110   NZ   LYS A 337    39.710   9.560  28.997  1.00 25.05        A
      ATOM   2111   C    LYS A 337    35.577  14.096  32.342  1.00 17.33        A
 30   ATOM   2112   O    LYS A 337    34.456  13.652  32.090  1.00 14.42        A
      ATOM   2113   N    ALA A 338    35.928  14.500  33.559  1.00 15.83        A
      ATOM   2114   CA   ALA A 338    34.989  14.395  34.674  1.00 17.52        A
      ATOM   2115   CB   ALA A 338    35.749  14.167  35.980  1.00 19.68        A
      ATOM   2116   C    ALA A 338    34.095  15.621  34.804  1.00 18.83        A
 35   ATOM   2117   O    ALA A 338    33.252  15.687  35.695  1.00 18.94        A
      ATOM   2118   N    HIS A 339    34.262  16.596  33.918  1.00 19.42        A
      ATOM   2119   CA   HIS A 339    33.438  17.796  34.004  1.00 19.28        A
      ATOM   2120   CB   HIS A 339    33.865  18.819  32.949  1.00 19.20        A
      ATOM   2121   CG   HIS A 339    33.163  20.134  33.074  1.00 20.26        A
 40   ATOM   2122   CD2  HIS A 339    33.549  21.299  33.649  1.00 18.95        A
      ATOM   2123   ND1  HIS A 339    31.880  20.340  32.612  1.00 19.10        A
      ATOM   2124   CE1  HIS A 339    31.506  21.576  32.896  1.00 22.19        A
      ATOM   2125   NE2  HIS A 339    32.500  22.179  33.525  1.00 21.98        A
      ATOM   2126   C    HIS A 339    31.957  17.448  33.845  1.00 19.13        A
 45   ATOM   2127   O    HIS A 339    31.597  16.576  33.061  1.00 19.52        A
      ATOM   2128   N    PRO A 340    31.079  18.125  34.606  1.00 19.80        A
      ATOM   2129   CD   PRO A 340    31.424  19.119  35.640  1.00 19.08        A
      ATOM   2130   CA   PRO A 340    29.630  17.900  34.569  1.00 20.52        A
      ATOM   2131   CB   PRO A 340    29.091  19.058  35.396  1.00 20.74        A
 50   ATOM   2132   CG   PRO A 340    30.146  19.207  36.454  1.00 19.20        A
      ATOM   2133   C    PRO A 340    29.000  17.834  33.176  1.00 21.42        A
      ATOM   2134   O    PRO A 340    28.049  17.088  32.955  1.00 22.48        A
      ATOM   2135   N    PHE A 341    29.528  18.606  32.237  1.00 21.33        A
      ATOM   2136   CA   PHE A 341    28.985  18.610  30.886  1.00 21.57        A
 55   ATOM   2137   CB   PHE A 341    29.739  19.624  30.017  1.00 21.64        A
      ATOM   2138   CG   PHE A 341    29.207  19.740  28.613  1.00 23.18        A
      ATOM   2139   CD1  PHE A 341    27.903  20.171  28.382  1.00 22.58        A
      ATOM   2140   CD2  PHE A 341    30.013  19.431  27.522  1.00 21.95        A
      ATOM   2141   CE1  PHE A 341    27.410  20.292  27.082  1.00 23.54        A
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	ATOM	2142	CE2	PHE	A	341	29.533	19.548	26.220	1.00	21.83	A
	ATOM	2143	CZ	PHE	A	341	28.228	19.980	25.998	1.00	23.23	A
	ATOM	2144	C	PHE	A	341	29.055	17.226	30.237	1.00	21.84	A
	ATOM	2145	O	PHE	A	341	28.232	16.896	29.389	1.00	20.37	A
5	ATOM	2146	N	PHE	A	342	30.034	16.422	30.640	1.00	20.51	A
	ATOM	2147	CA	PHE	A	342	30.221	15.085	30.077	1.00	23.01	A
	ATOM	2148	CB	PHE	A	342	31.710	14.809	29.871	1.00	18.00	A
	ATOM	2149	CG	PHE	A	342	32.398	15.812	28.971	1.00	17.05	A
	ATOM	2150	CD1	PHE	A	342	32.010	15.987	27.652	1.00	17.78	A
10	ATOM	2151	CD2	PHE	A	342	33.487	16.534	29.450	1.00	15.72	A
	ATOM	2152	CE1	PHE	A	342	32.702	16.867	26.811	1.00	18.08	A
	ATOM	2153	CE2	PHE	A	342	34.184	17.414	28.617	1.00	17.45	A
	ATOM	2154	CZ	PHE	A	342	33.790	17.578	27.298	1.00	16.56	A
	ATOM	2155	C	PHE	A	342	29.679	13.972	30.976	1.00	24.95	A
15	ATOM	2156	O	PHE	A	342	30.002	12.798	30.777	1.00	23.95	A
	ATOM	2157	N	GLU	A	343	28.861	14.333	31.958	1.00	27.35	A
	ATOM	2158	CA	GLU	A	343	28.325	13.349	32.897	1.00	30.28	A
	ATOM	2159	CB	GLU	A	343	27.187	13.964	33.716	1.00	32.20	A
	ATOM	2160	CG	GLU	A	343	26.581	12.991	34.714	1.00	39.71	A
20	ATOM	2161	CD	GLU	A	343	25.628	13.661	35.688	1.00	44.72	A
	ATOM	2162	OE1	GLU	A	343	24.661	14.314	35.234	1.00	47.55	A
	ATOM	2163	OE2	GLU	A	343	25.847	13.526	36.911	1.00	46.89	A
	ATOM	2164	C	GLU	A	343	27.852	12.017	32.305	1.00	28.98	A
	ATOM	2165	O	GLU	A	343	28.225	10.952	32.800	1.00	31.73	A
25	ATOM	2166	N	SER	A	344	27.037	12.067	31.258	1.00	26.09	A
	ATOM	2167	CA	SER	A	344	26.520	10.838	30.656	1.00	28.36	A
	ATOM	2168	CB	SER	A	344	25.129	11.089	30.067	1.00	28.73	A
	ATOM	2169	OG	SER	A	344	25.203	11.942	28.940	1.00	30.91	A
	ATOM	2170	C	SER	A	344	27.407	10.214	29.577	1.00	27.66	A
30	ATOM	2171	O	SER	A	344	26.987	9.281	28.900	1.00	28.66	A
	ATOM	2172	N	VAL	A	345	28.627	10.715	29.419	1.00	26.75	A
	ATOM	2173	CA	VAL	A	345	29.534	10.183	28.402	1.00	23.44	A
	ATOM	2174	CB	VAL	A	345	30.565	11.256	27.950	1.00	23.10	A
	ATOM	2175	CG1	VAL	A	345	31.589	10.631	26.995	1.00	22.24	A
35	ATOM	2176	CG2	VAL	A	345	29.854	12.418	27.275	1.00	20.05	A
	ATOM	2177	C	VAL	A	345	30.326	8.957	28.855	1.00	24.26	A
	ATOM	2178	O	VAL	A	345	30.876	8.930	29.960	1.00	22.83	A
	ATOM	2179	N	THR	A	346	30.374	7.942	27.997	1.00	21.77	A
	ATOM	2180	CA	THR	A	346	31.153	6.740	28.272	1.00	23.70	A
40	ATOM	2181	CB	THR	A	346	30.391	5.455	27.857	1.00	26.53	A
	ATOM	2182	OG1	THR	A	346	29.248	5.284	28.706	1.00	29.98	A
	ATOM	2183	CG2	THR	A	346	31.289	4.231	27.990	1.00	24.28	A
	ATOM	2184	C	THR	A	346	32.383	6.945	27.385	1.00	23.43	A
	ATOM	2185	O	THR	A	346	32.306	6.827	26.160	1.00	24.50	A
45	ATOM	2186	N	TRP	A	347	33.508	7.270	28.013	1.00	22.98	A
	ATOM	2187	CA	TRP	A	347	34.744	7.569	27.300	1.00	23.81	A
	ATOM	2188	CB	TRP	A	347	35.683	8.352	28.219	1.00	22.54	A
	ATOM	2189	CG	TRP	A	347	35.128	9.658	28.693	1.00	20.61	A
	ATOM	2190	CD2	TRP	A	347	35.257	10.927	28.040	1.00	19.11	A
50	ATOM	2191	CE2	TRP	A	347	34.581	11.881	28.838	1.00	18.39	A
	ATOM	2192	CE3	TRP	A	347	35.878	11.351	26.858	1.00	18.16	A
	ATOM	2193	CD1	TRP	A	347	34.397	9.883	29.828	1.00	18.35	A
	ATOM	2194	NE1	TRP	A	347	34.065	11.218	29.923	1.00	19.51	A
	ATOM	2195	CZ2	TRP	A	347	34.510	13.234	28.491	1.00	16.88	A
55	ATOM	2196	CZ3	TRP	A	347	35.808	12.701	26.511	1.00	17.23	A
	ATOM	2197	CH2	TRP	A	347	35.127	13.624	27.327	1.00	18.16	A
	ATOM	2198	C	TRP	A	347	35.538	6.429	26.675	1.00	25.79	A
	ATOM	2199	O	TRP	A	347	36.304	6.654	25.742	1.00	24.67	A
	ATOM	2200	N	ALA	A	348	35.360	5.215	27.183	1.00	27.10	A

	ATOM	2201	CA	ALA A 348	36.116	4.063	26.697	1.00 27.46	A
	ATOM	2202	CB	ALA A 348	35.899	2.869	27.636	1.00 27.09	A
	ATOM	2203	C	ALA A 348	35.895	3.620	25.256	1.00 27.18	A
	ATOM	2204	O	ALA A 348	36.830	3.148	24.613	1.00 29.41	A
5	ATOM	2205	N	ASN A 349	34.682	3.769	24.735	1.00 26.55	A
	ATOM	2206	CA	ASN A 349	34.418	3.310	23.375	1.00 27.28	A
	ATOM	2207	CB	ASN A 349	33.700	1.962	23.444	1.00 29.37	A
	ATOM	2208	CG	ASN A 349	32.299	2.088	24.013	1.00 30.92	A
	ATOM	2209	OD1	ASN A 349	32.045	2.942	24.859	1.00 30.17	A
10	ATOM	2210	ND2	ASN A 349	31.386	1.237	23.553	1.00 33.52	A
	ATOM	2211	C	ASN A 349	33.599	4.265	22.509	1.00 26.47	A
	ATOM	2212	O	ASN A 349	32.669	3.843	21.819	1.00 25.87	A
	ATOM	2213	N	LEU A 350	33.947	5.543	22.518	1.00 24.45	A
	ATOM	2214	CA	LEU A 350	33.203	6.510	21.721	1.00 23.14	A
15	ATOM	2215	CB	LEU A 350	33.837	7.898	21.848	1.00 23.22	A
	ATOM	2216	CG	LEU A 350	33.659	8.605	23.191	1.00 21.05	A
	ATOM	2217	CD1	LEU A 350	34.646	9.756	23.293	1.00 19.36	A
	ATOM	2218	CD2	LEU A 350	32.220	9.094	23.319	1.00 18.78	A
	ATOM	2219	C	LEU A 350	33.082	6.152	20.240	1.00 22.60	A
20	ATOM	2220	O	LEU A 350	32.011	6.296	19.650	1.00 21.15	A
	ATOM	2221	N	HIS A 351	34.165	5.689	19.627	1.00 23.13	A
	ATOM	2222	CA	HIS A 351	34.089	5.387	18.204	1.00 27.83	A
	ATOM	2223	CB	HIS A 351	35.506	5.325	17.596	1.00 29.36	A
	ATOM	2224	CG	HIS A 351	36.082	3.950	17.493	1.00 32.07	A
25	ATOM	2225	CD2	HIS A 351	36.611	3.128	18.431	1.00 32.39	A
	ATOM	2226	ND1	HIS A 351	36.197	3.285	16.291	1.00 33.02	A
	ATOM	2227	CE1	HIS A 351	36.775	2.113	16.493	1.00 33.58	A
	ATOM	2228	NE2	HIS A 351	37.036	1.992	17.782	1.00 31.76	A
	ATOM	2229	C	HIS A 351	33.258	4.144	17.874	1.00 28.12	A
30	ATOM	2230	O	HIS A 351	33.015	3.847	16.707	1.00 29.49	A
	ATOM	2231	N	GLN A 352	32.800	3.442	18.908	1.00 29.28	A
	ATOM	2232	CA	GLN A 352	31.963	2.255	18.726	1.00 29.67	A
	ATOM	2233	CB	GLN A 352	32.366	1.145	19.694	1.00 30.56	A
	ATOM	2234	CG	GLN A 352	33.169	0.041	19.041	1.00 30.88	A
35	ATOM	2235	CD	GLN A 352	34.493	-0.186	19.729	1.00 31.21	A
	ATOM	2236	OE1	GLN A 352	34.541	-0.450	20.928	1.00 30.76	A
	ATOM	2237	NE2	GLN A 352	35.578	-0.084	18.971	1.00 32.30	A
	ATOM	2238	C	GLN A 352	30.504	2.638	18.963	1.00 30.42	A
	ATOM	2239	O	GLN A 352	29.595	1.831	18.770	1.00 29.01	A
40	ATOM	2240	N	GLN A 353	30.290	3.875	19.397	1.00 27.64	A
	ATOM	2241	CA	GLN A 353	28.948	4.365	19.652	1.00 27.42	A
	ATOM	2242	CB	GLN A 353	28.977	5.401	20.775	1.00 25.77	A
	ATOM	2243	CG	GLN A 353	29.408	4.837	22.115	1.00 27.34	A
	ATOM	2244	CD	GLN A 353	29.638	5.914	23.156	1.00 27.19	A
45	ATOM	2245	OE1	GLN A 353	28.875	6.872	23.252	1.00 28.29	A
	ATOM	2246	NE2	GLN A 353	30.687	5.753	23.951	1.00 28.79	A
	ATOM	2247	C	GLN A 353	28.375	4.989	18.385	1.00 29.00	A
	ATOM	2248	O	GLN A 353	29.118	5.455	17.516	1.00 29.14	A
	ATOM	2249	N	THR A 354	27.053	4.984	18.276	1.00 27.31	A
50	ATOM	2250	CA	THR A 354	26.390	5.568	17.119	1.00 27.85	A
	ATOM	2251	CB	THR A 354	24.991	4.941	16.904	1.00 30.69	A
	ATOM	2252	OG1	THR A 354	25.132	3.532	16.665	1.00 30.07	A
	ATOM	2253	CG2	THR A 354	24.289	5.585	15.709	1.00 29.58	A
	ATOM	2254	C	THR A 354	26.244	7.062	17.376	1.00 26.85	A
55	ATOM	2255	O	THR A 354	25.592	7.475	18.329	1.00 25.77	A
	ATOM	2256	N	PRO A 355	26.867	7.898	16.533	1.00 27.22	A
	ATOM	2257	CD	PRO A 355	27.792	7.588	15.431	1.00 25.89	A
	ATOM	2258	CA	PRO A 355	26.763	9.346	16.734	1.00 27.23	A
	ATOM	2259	CB	PRO A 355	27.625	9.915	15.609	1.00 24.91	A

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      ATOM   2260  CG  PRO A 355      28.643   8.838  15.385  1.00 25.54      A
      ATOM   2261  C   PRO A 355      25.322   9.837  16.641  1.00 28.07      A
      ATOM   2262  O   PRO A 355      24.548   9.364  15.810  1.00 27.24      A
      ATOM   2263  N   PRO A 356      24.941  10.792  17.500  1.00 28.28      A
 5    ATOM   2264  CD  PRO A 356      25.752  11.560  18.462  1.00 28.31      A
      ATOM   2265  CA  PRO A 356      23.572  11.306  17.448  1.00 28.44      A
      ATOM   2266  CB  PRO A 356      23.539  12.301  18.604  1.00 28.11      A
      ATOM   2267  CG  PRO A 356      24.946  12.832  18.612  1.00 26.86      A
      ATOM   2268  C   PRO A 356      23.363  11.978  16.097  1.00 29.25      A
10    ATOM   2269  O   PRO A 356      24.304  12.537  15.529  1.00 27.27      A
      ATOM   2270  N   ALA A 357      22.143  11.910  15.575  1.00 30.45      A
      ATOM   2271  CA  ALA A 357      21.848  12.521  14.287  1.00 32.81      A
      ATOM   2272  CB  ALA A 357      20.507  12.019  13.757  1.00 31.99      A
      ATOM   2273  C   ALA A 357      21.824  14.035  14.448  1.00 35.05      A
15    ATOM   2274  O   ALA A 357      21.194  14.561  15.369  1.00 35.04      A
      ATOM   2275  N   LEU A 358      22.516  14.730  13.552  1.00 37.81      A
      ATOM   2276  CA  LEU A 358      22.578  16.185  13.597  1.00 42.15      A
      ATOM   2277  CB  LEU A 358      23.679  16.681  12.658  1.00 39.54      A
      ATOM   2278  CG  LEU A 358      25.086  16.285  13.109  1.00 39.51      A
20    ATOM   2279  CD1 LEU A 358      26.102  16.686  12.062  1.00 39.29      A
      ATOM   2280  CD2 LEU A 358      25.395  16.953  14.445  1.00 40.01      A
      ATOM   2281  C   LEU A 358      21.241  16.837  13.242  1.00 45.91      A
      ATOM   2282  O   LEU A 358      20.874  16.927  12.069  1.00 45.71      A
      ATOM   2283  N   THR A 359      20.530  17.290  14.275  1.00 50.06      A
25    ATOM   2284  CA  THR A 359      19.223  17.939  14.140  1.00 53.73      A
      ATOM   2285  CB  THR A 359      19.353  19.428  13.726  1.00 54.04      A
      ATOM   2286  OG1 THR A 359      19.995  19.521  12.448  1.00 56.35      A
      ATOM   2287  CG2 THR A 359      20.158  20.204  14.763  1.00 54.32      A
      ATOM   2288  C   THR A 359      18.309  17.236  13.139  1.00 54.47      A
30    ATOM   2289  O   THR A 359      18.483  16.016  12.930  1.00 55.90      A
      ATOM   2290  OXT THR A 359      17.407  17.908  12.595  1.00 56.97      A
      TER
      ATOM      1  CB  PRO B  71      99.838  54.646  -7.659  1.00 20.00      6
      ATOM      2  CG  PRO B  71      99.216  55.105  -6.341  1.00 20.00      6
35    ATOM      3  C   PRO B  71      98.903  54.776  -9.981  1.00 20.00      6
      ATOM      4  O   PRO B  71      98.022  53.925 -10.109  1.00 20.00      8
      ATOM      5  N   PRO B  71      97.782  55.851  -8.042  1.00 20.00      7
      ATOM      6  CD  PRO B  71      97.728  55.323  -6.668  1.00 20.00      6
      ATOM      7  CA  PRO B  71      99.087  55.515  -8.658  1.00 20.00      6
40    ATOM      8  N   PRO B  72      99.732  55.097 -10.985  1.00 20.00      7
      ATOM      9  CD  PRO B  72     100.794  56.121 -10.977  1.00 20.00      6
      ATOM     10  CA  PRO B  72      99.645  54.451 -12.297  1.00 20.00      6
      ATOM     11  CB  PRO B  72     100.885  54.973 -13.017  1.00 20.00      6
      ATOM     12  CG  PRO B  72     101.026  56.352 -12.456  1.00 20.00      6
45    ATOM     13  C   PRO B  72      99.627  52.924 -12.202  1.00 20.00      6
      ATOM     14  O   PRO B  72     100.246  52.338 -11.314  1.00 20.00      8
      ATOM     15  N   ALA B  73      98.906  52.293 -13.122  1.00 20.00      7
      ATOM     16  CA  ALA B  73      98.805  50.840 -13.167  1.00 20.00      6
      ATOM     17  CB  ALA B  73      97.420  50.392 -12.710  1.00 20.00      6
50    ATOM     18  C   ALA B  73      99.053  50.398 -14.604  1.00 20.00      6
      ATOM     19  O   ALA B  73      99.027  51.215 -15.526  1.00 20.00      8
      ATOM     20  N   PRO B  74      99.313  49.100 -14.818  1.00 20.00      7
      ATOM     21  CD  PRO B  74      99.473  47.995 -13.857  1.00 20.00      6
      ATOM     22  CA  PRO B  74      99.553  48.642 -16.189  1.00 20.00      6
55    ATOM     23  CB  PRO B  74      99.700  47.132 -16.023  1.00 20.00      6
      ATOM     24  CG  PRO B  74     100.292  47.004 -14.649  1.00 20.00      6
      ATOM     25  C   PRO B  74      98.371  49.018 -17.079  1.00 20.00      6
      ATOM     26  O   PRO B  74      97.279  49.296 -16.583  1.00 20.00      8
      ATOM     27  N   ALA B  75      98.589  49.037 -18.389  1.00 20.00      7
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      ATOM    28   CA   ALA B   75      97.516  49.368 -19.321  1.00  20.00   6
      ATOM    29   CB   ALA B   75      98.061  49.462 -20.745  1.00  20.00   6
      ATOM    30   C    ALA B   75      96.446  48.285 -19.246  1.00  20.00   6
      ATOM    31   O    ALA B   75      96.745  47.126 -18.961  1.00  20.00   8
   5  ATOM    32   N    LYS B   76      95.200  48.666 -19.494  1.00  20.00   7
      ATOM    33   CA   LYS B   76      94.098  47.716 -19.463  1.00  20.00   6
      ATOM    34   CB   LYS B   76      92.793  48.431 -19.805  1.00  20.00   6
      ATOM    35   CG   LYS B   76      91.546  47.792 -19.225  1.00  20.00   6
      ATOM    36   CD   LYS B   76      91.511  47.932 -17.711  1.00  20.00   6
  10  ATOM    37   CE   LYS B   76      90.184  47.454 -17.152  1.00  20.00   6
      ATOM    38   NZ   LYS B   76      90.108  47.606 -15.673  1.00  20.00   7
      ATOM    39   C    LYS B   76      94.389  46.645 -20.513  1.00  20.00   6
      ATOM    40   O    LYS B   76      94.736  46.968 -21.645  1.00  20.00   8
      ATOM    41   N    LYS B   77      94.269  45.374 -20.145  1.00  20.00   7
  15  ATOM    42   CA   LYS B   77      94.525  44.311 -21.107  1.00  20.00   6
      ATOM    43   CB   LYS B   77      94.875  43.008 -20.384  1.00  20.00   6
      ATOM    44   CG   LYS B   77      96.117  43.125 -19.506  1.00  20.00   6
      ATOM    45   CD   LYS B   77      96.461  41.812 -18.842  1.00  20.00   6
      ATOM    46   CE   LYS B   77      97.501  42.008 -17.745  1.00  20.00   6
  20  ATOM    47   NZ   LYS B   77      98.771  42.582 -18.255  1.00  20.00   7
      ATOM    48   C    LYS B   77      93.311  44.111 -22.012  1.00  20.00   6
      ATOM    49   O    LYS B   77      92.218  44.585 -21.704  1.00  20.00   8
      ATOM    50   N    ARG B   78      93.514  43.418 -23.129  1.00  20.00   7
      ATOM    51   CA   ARG B   78      92.442  43.158 -24.086  1.00  20.00   6
  25  ATOM    52   CB   ARG B   78      92.465  44.224 -25.193  1.00  20.00   6
      ATOM    53   CG   ARG B   78      93.787  44.344 -25.925  1.00  20.00   6
      ATOM    54   CD   ARG B   78      93.833  45.612 -26.771  1.00  20.00   6
      ATOM    55   NE   ARG B   78      95.052  45.702 -27.575  1.00  20.00   7
      ATOM    56   CZ   ARG B   78      96.287  45.751 -27.078  1.00  20.00   6
  30  ATOM    57   NH1  ARG B   78      96.486  45.721 -25.764  1.00  20.00   7
      ATOM    58   NH2  ARG B   78      97.330  45.828 -27.897  1.00  20.00   7
      ATOM    59   C    ARG B   78      92.570  41.754 -24.678  1.00  20.00   6
      ATOM    60   O    ARG B   78      93.625  41.126 -24.581  1.00  20.00   8
      ATOM    61   N    PRO B   79      91.494  41.240 -25.303  1.00  20.00   7
  35  ATOM    62   CD   PRO B   79      90.195  41.894 -25.543  1.00  20.00   6
      ATOM    63   CA   PRO B   79      91.519  39.899 -25.896  1.00  20.00   6
      ATOM    64   CB   PRO B   79      90.214  39.848 -26.691  1.00  20.00   6
      ATOM    65   CG   PRO B   79      89.304  40.725 -25.889  1.00  20.00   6
      ATOM    66   C    PRO B   79      92.737  39.614 -26.778  1.00  20.00   6
  40  ATOM    67   O    PRO B   79      93.311  38.523 -26.717  1.00  20.00   8
      ATOM    68   N    GLU B   80      93.124  40.597 -27.589  1.00  20.00   7
      ATOM    69   CA   GLU B   80      94.254  40.441 -28.503  1.00  20.00   6
      ATOM    70   CB   GLU B   80      94.358  41.644 -29.446  1.00  20.00   6
      ATOM    71   CG   GLU B   80      94.881  42.912 -28.800  1.00  20.00   6
  45  ATOM    72   CD   GLU B   80      95.009  44.057 -29.788  1.00  20.00   6
      ATOM    73   OE1  GLU B   80      93.968  44.513 -30.308  1.00  20.00   8
      ATOM    74   OE2  GLU B   80      96.150  44.498 -30.047  1.00  20.00   8
      ATOM    75   C    GLU B   80      95.591  40.235 -27.787  1.00  20.00   6
      ATOM    76   O    GLU B   80      96.558  39.795 -28.405  1.00  20.00   8
  50  ATOM    77   N    ASP B   81      95.656  40.559 -26.497  1.00  20.00   7
      ATOM    78   CA   ASP B   81      96.902  40.380 -25.749  1.00  20.00   6
      ATOM    79   CB   ASP B   81      96.888  41.192 -24.446  1.00  20.00   6
      ATOM    80   CG   ASP B   81      96.774  42.688 -24.682  1.00  20.00   6
      ATOM    81   OD1  ASP B   81      97.436  43.193 -25.606  1.00  20.00   8
  55  ATOM    82   OD2  ASP B   81      96.033  43.362 -23.933  1.00  20.00   8
      ATOM    83   C    ASP B   81      97.111  38.914 -25.393  1.00  20.00   6
      ATOM    84   O    ASP B   81      98.172  38.535 -24.890  1.00  20.00   8
      ATOM    85   N    PHE B   82      96.103  38.093 -25.679  1.00  20.00   7
      ATOM    86   CA   PHE B   82      96.140  36.677 -25.340  1.00  20.00   6
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      ATOM     87   CB   PHE B  82      95.056  36.369 -24.302  1.00 20.00   6
      ATOM     88   CG   PHE B  82      95.157  37.187 -23.050  1.00 20.00   6
      ATOM     89   CD1  PHE B  82      95.880  36.724 -21.959  1.00 20.00   6
      ATOM     90   CD2  PHE B  82      94.525  38.423 -22.961  1.00 20.00   6
  5   ATOM     91   CE1  PHE B  82      95.976  37.479 -20.793  1.00 20.00   6
      ATOM     92   CE2  PHE B  82      94.615  39.188 -21.800  1.00 20.00   6
      ATOM     93   CZ   PHE B  82      95.343  38.712 -20.713  1.00 20.00   6
      ATOM     94   C    PHE B  82      95.929  35.719 -26.496  1.00 20.00   6
      ATOM     95   O    PHE B  82      95.342  36.061 -27.524  1.00 20.00   8
 10   ATOM     96   N    LYS B  83      96.406  34.500 -26.286  1.00 20.00   7
      ATOM     97   CA   LYS B  83      96.242  33.411 -27.228  1.00 20.00   6
      ATOM     98   CB   LYS B  83      97.594  32.777 -27.562  1.00 20.00   6
      ATOM     99   CG   LYS B  83      97.503  31.531 -28.425  1.00 20.00   6
      ATOM    100   CD   LYS B  83      98.888  31.074 -28.856  1.00 20.00   6
 15   ATOM    101   CE   LYS B  83      98.826  29.808 -29.699  1.00 20.00   6
      ATOM    102   NZ   LYS B  83      98.287  28.654 -28.918  1.00 20.00   7
      ATOM    103   C    LYS B  83      95.387  32.446 -26.416  1.00 20.00   6
      ATOM    104   O    LYS B  83      95.884  31.776 -25.510  1.00 20.00   8
      ATOM    105   N    PHE B  84      94.094  32.393 -26.710  1.00 20.00   7
 20   ATOM    106   CA   PHE B  84      93.217  31.511 -25.958  1.00 20.00   6
      ATOM    107   CB   PHE B  84      91.758  31.928 -26.133  1.00 20.00   6
      ATOM    108   CG   PHE B  84      91.426  33.228 -25.462  1.00 20.00   6
      ATOM    109   CD1  PHE B  84      91.668  34.439 -26.099  1.00 20.00   6
      ATOM    110   CD2  PHE B  84      90.907  33.243 -24.174  1.00 20.00   6
 25   ATOM    111   CE1  PHE B  84      91.400  35.644 -25.464  1.00 20.00   6
      ATOM    112   CE2  PHE B  84      90.636  34.447 -23.528  1.00 20.00   6
      ATOM    113   CZ   PHE B  84      90.884  35.646 -24.176  1.00 20.00   6
      ATOM    114   C    PHE B  84      93.402  30.054 -26.335  1.00 20.00   6
      ATOM    115   O    PHE B  84      93.734  29.734 -27.476  1.00 20.00   8
 30   ATOM    116   N    GLY B  85      93.196  29.178 -25.359  1.00 20.00   7
      ATOM    117   CA   GLY B  85      93.349  27.758 -25.591  1.00 20.00   6
      ATOM    118   C    GLY B  85      92.103  26.977 -25.221  1.00 20.00   6
      ATOM    119   O    GLY B  85      90.982  27.393 -25.525  1.00 20.00   8
      ATOM    120   N    LYS B  86      92.296  25.858 -24.534  1.00 20.00   7
 35   ATOM    121   CA   LYS B  86      91.182  25.005 -24.153  1.00 20.00   6
      ATOM    122   CB   LYS B  86      91.695  23.640 -23.687  1.00 20.00   6
      ATOM    123   CG   LYS B  86      92.421  23.667 -22.356  1.00 20.00   6
      ATOM    124   CD   LYS B  86      92.855  22.272 -21.941  1.00 20.00   6
      ATOM    125   CE   LYS B  86      93.685  22.319 -20.668  1.00 20.00   6
 40   ATOM    126   NZ   LYS B  86      94.209  20.975 -20.287  1.00 20.00   7
      ATOM    127   C    LYS B  86      90.267  25.576 -23.077  1.00 20.00   6
      ATOM    128   O    LYS B  86      90.668  26.410 -22.260  1.00 20.00   8
      ATOM    129   N    ILE B  87      89.026  25.106 -23.102  1.00 20.00   7
      ATOM    130   CA   ILE B  87      88.023  25.497 -22.131  1.00 20.00   6
 45   ATOM    131   CB   ILE B  87      86.604  25.159 -22.647  1.00 20.00   6
      ATOM    132   CG2  ILE B  87      85.582  25.261 -21.503  1.00 20.00   6
      ATOM    133   CG1  ILE B  87      86.260  26.085 -23.820  1.00 20.00   6
      ATOM    134   CD1  ILE B  87      84.912  25.819 -24.463  1.00 20.00   6
      ATOM    135   C    ILE B  87      88.312  24.687 -20.872  1.00 20.00   6
 50   ATOM    136   O    ILE B  87      88.396  23.461 -20.927  1.00 20.00   8
      ATOM    137   N    LEU B  88      88.473  25.368 -19.742  1.00 20.00   7
      ATOM    138   CA   LEU B  88      88.757  24.686 -18.486  1.00 20.00   6
      ATOM    139   CB   LEU B  88      89.592  25.586 -17.575  1.00 20.00   6
      ATOM    140   CG   LEU B  88      90.968  25.987 -18.112  1.00 20.00   6
 55   ATOM    141   CD1  LEU B  88      91.611  27.006 -17.186  1.00 20.00   6
      ATOM    142   CD2  LEU B  88      91.836  24.756 -18.234  1.00 20.00   6
      ATOM    143   C    LEU B  88      87.471  24.259 -17.776  1.00 20.00   6
      ATOM    144   O    LEU B  88      87.434  23.334 -17.014  1.00 20.00   8
      ATOM    145   N    GLY B  89      86.410  25.051 -18.024  1.00 20.00   7
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     ATOM   146   CA   GLY  B  89      85.148  24.749 -17.382  1.00 20.00   6
     ATOM   147   C    GLY  B  89      84.038  25.599 -17.953  1.00 20.00   6
     ATOM   148   O    GLY  B  89      84.296  26.657 -18.541  1.00 20.00   8
     ATOM   149   N    GLU  B  90      82.807  25.133 -17.781  1.00 20.00   7
 5   ATOM   150   CA   GLU  B  90      81.629  25.832 -18.279  1.00 20.00   6
     ATOM   151   CB   GLU  B  90      81.041  25.070 -19.471  1.00 20.00   6
     ATOM   152   CG   GLU  B  90      81.929  25.084 -20.706  1.00 20.00   6
     ATOM   153   CD   GLU  B  90      81.434  24.157 -21.802  1.00 20.00   6
     ATOM   154   OE1  GLU  B  90      81.539  22.923 -21.639  1.00 20.00   8
10   ATOM   155   OE2  GLU  B  90      80.935  24.662 -22.827  1.00 20.00   8
     ATOM   156   C    GLU  B  90      80.575  25.970 -17.188  1.00 20.00   6
     ATOM   157   O    GLU  B  90      80.208  24.994 -16.543  1.00 20.00   8
     ATOM   158   N    GLY  B  91      80.103  27.193 -16.979  1.00 20.00   7
     ATOM   159   CA   GLY  B  91      79.080  27.431 -15.979  1.00 20.00   6
15   ATOM   160   C    GLY  B  91      77.835  27.949 -16.673  1.00 20.00   6
     ATOM   161   O    GLY  B  91      77.804  28.046 -17.903  1.00 20.00   8
     ATOM   162   N    SER  B  92      76.808  28.291 -15.904  1.00 20.00   7
     ATOM   163   CA   SER  B  92      75.582  28.794 -16.508  1.00 20.00   6
     ATOM   164   CB   SER  B  92      74.428  28.719 -15.505  1.00 20.00   6
20   ATOM   165   OG   SER  B  92      74.786  29.335 -14.282  1.00 20.00   8
     ATOM   166   C    SER  B  92      75.726  30.219 -17.039  1.00 20.00   6
     ATOM   167   O    SER  B  92      75.078  30.585 -18.018  1.00 20.00   8
     ATOM   168   N    PHE  B  93      76.578  31.025 -16.411  1.00 20.00   7
     ATOM   169   CA   PHE  B  93      76.763  32.399 -16.870  1.00 20.00   6
25   ATOM   170   CB   PHE  B  93      76.276  33.384 -15.807  1.00 20.00   6
     ATOM   171   CG   PHE  B  93      74.832  33.220 -15.469  1.00 20.00   6
     ATOM   172   CD1  PHE  B  93      74.435  32.323 -14.483  1.00 20.00   6
     ATOM   173   CD2  PHE  B  93      73.859  33.914 -16.183  1.00 20.00   6
     ATOM   174   CE1  PHE  B  93      73.086  32.117 -14.210  1.00 20.00   6
30   ATOM   175   CE2  PHE  B  93      72.507  33.715 -15.919  1.00 20.00   6
     ATOM   176   CZ   PHE  B  93      72.120  32.812 -14.930  1.00 20.00   6
     ATOM   177   C    PHE  B  93      78.197  32.736 -17.240  1.00 20.00   6
     ATOM   178   O    PHE  B  93      78.543  33.908 -17.397  1.00 20.00   8
     ATOM   179   N    SER  B  94      79.030  31.713 -17.394  1.00 20.00   7
35   ATOM   180   CA   SER  B  94      80.421  31.948 -17.735  1.00 20.00   6
     ATOM   181   CB   SER  B  94      81.174  32.443 -16.503  1.00 20.00   6
     ATOM   182   OG   SER  B  94      81.237  31.410 -15.535  1.00 20.00   8
     ATOM   183   C    SER  B  94      81.123  30.707 -18.253  1.00 20.00   6
     ATOM   184   O    SER  B  94      80.666  29.584 -18.048  1.00 20.00   8
40   ATOM   185   N    THR  B  95      82.252  30.937 -18.913  1.00 20.00   7
     ATOM   186   CA   THR  B  95      83.088  29.879 -19.455  1.00 20.00   6
     ATOM   187   CB   THR  B  95      82.942  29.770 -20.985  1.00 20.00   6
     ATOM   188   OG1  THR  B  95      81.589  29.425 -21.309  1.00 20.00   8
     ATOM   189   CG2  THR  B  95      83.873  28.694 -21.536  1.00 20.00   6
45   ATOM   190   C    THR  B  95      84.524  30.264 -19.118  1.00 20.00   6
     ATOM   191   O    THR  B  95      84.957  31.388 -19.399  1.00 20.00   8
     ATOM   192   N    VAL  B  96      85.257  29.348 -18.498  1.00 20.00   7
     ATOM   193   CA   VAL  B  96      86.642  29.628 -18.141  1.00 20.00   6
     ATOM   194   CB   VAL  B  96      86.991  29.050 -16.761  1.00 20.00   6
50   ATOM   195   CG1  VAL  B  96      88.438  29.390 -16.407  1.00 20.00   6
     ATOM   196   CG2  VAL  B  96      86.041  29.627 -15.707  1.00 20.00   6
     ATOM   197   C    VAL  B  96      87.541  29.027 -19.210  1.00 20.00   6
     ATOM   198   O    VAL  B  96      87.432  27.845 -19.540  1.00 20.00   8
     ATOM   199   N    VAL  B  97      88.416  29.858 -19.763  1.00 20.00   7
55   ATOM   200   CA   VAL  B  97      89.312  29.430 -20.824  1.00 20.00   6
     ATOM   201   CB   VAL  B  97      89.006  30.194 -22.130  1.00 20.00   6
     ATOM   202   CG1  VAL  B  97      89.828  29.624 -23.279  1.00 20.00   6
     ATOM   203   CG2  VAL  B  97      87.515  30.116 -22.444  1.00 20.00   6
     ATOM   204   C    VAL  B  97      90.771  29.664 -20.458  1.00 20.00   6
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      ATOM   205  O    VAL B  97       91.122  30.698 -19.889  1.00 20.00   8
      ATOM   206  N    LEU B  98       91.617  28.690 -20.770  1.00 20.00   7
      ATOM   207  CA   LEU B  98       93.039  28.821 -20.499  1.00 20.00   6
      ATOM   208  CB   LEU B  98       93.727  27.459 -20.618  1.00 20.00   6
  5   ATOM   209  CG   LEU B  98       95.240  27.421 -20.383  1.00 20.00   6
      ATOM   210  CD1  LEU B  98       95.565  28.019 -19.021  1.00 20.00   6
      ATOM   211  CD2  LEU B  98       95.739  25.987 -20.463  1.00 20.00   6
      ATOM   212  C    LEU B  98       93.580  29.785 -21.552  1.00 20.00   6
      ATOM   213  O    LEU B  98       93.293  29.637 -22.738  1.00 20.00   8
 10   ATOM   214  N    ALA B  99       94.343  30.783 -21.121  1.00 20.00   7
      ATOM   215  CA   ALA B  99       94.897  31.767 -22.043  1.00 20.00   6
      ATOM   216  CB   ALA B  99       94.087  33.055 -21.980  1.00 20.00   6
      ATOM   217  C    ALA B  99       96.353  32.067 -21.723  1.00 20.00   6
      ATOM   218  O    ALA B  99       96.748  32.110 -20.554  1.00 20.00   8
 15   ATOM   219  N    ARG B 100       97.152  32.270 -22.763  1.00 20.00   7
      ATOM   220  CA   ARG B 100       98.554  32.596 -22.568  1.00 20.00   6
      ATOM   221  CB   ARG B 100       99.442  31.657 -23.393  1.00 20.00   6
      ATOM   222  CG   ARG B 100      100.934  31.833 -23.131  1.00 20.00   6
      ATOM   223  CD   ARG B 100      101.770  30.835 -23.923  1.00 20.00   6
 20   ATOM   224  NE   ARG B 100      101.600  29.452 -23.469  1.00 20.00   7
      ATOM   225  CZ   ARG B 100      102.059  28.970 -22.314  1.00 20.00   6
      ATOM   226  NH1  ARG B 100      102.722  29.752 -21.473  1.00 20.00   7
      ATOM   227  NH2  ARG B 100      101.864  27.694 -22.003  1.00 20.00   7
      ATOM   228  C    ARG B 100       98.756  34.045 -23.004  1.00 20.00   6
 25   ATOM   229  O    ARG B 100       98.454  34.408 -24.146  1.00 20.00   8
      ATOM   230  N    GLU B 101       99.228  34.883 -22.087  1.00 20.00   7
      ATOM   231  CA   GLU B 101       99.470  36.286 -22.408  1.00 20.00   6
      ATOM   232  CB   GLU B 101       99.709  37.091 -21.123  1.00 20.00   6
      ATOM   233  CG   GLU B 101       99.986  38.571 -21.363  1.00 20.00   6
 30   ATOM   234  CD   GLU B 101      100.164  39.347 -20.075  1.00 20.00   6
      ATOM   235  OE1  GLU B 101      100.717  38.780 -19.114  1.00 20.00   8
      ATOM   236  OE2  GLU B 101       99.765  40.531 -20.025  1.00 20.00   8
      ATOM   237  C    GLU B 101      100.703  36.338 -23.317  1.00 20.00   6
      ATOM   238  O    GLU B 101      101.773  35.865 -22.944  1.00 20.00   8
 35   ATOM   239  N    LEU B 102      100.546  36.909 -24.507  1.00 20.00   7
      ATOM   240  CA   LEU B 102      101.632  36.982 -25.482  1.00 20.00   6
      ATOM   241  CB   LEU B 102      101.145  37.683 -26.753  1.00 20.00   6
      ATOM   242  CG   LEU B 102      100.013  36.985 -27.517  1.00 20.00   6
      ATOM   243  CD1  LEU B 102       99.500  37.897 -28.623  1.00 20.00   6
 40   ATOM   244  CD2  LEU B 102      100.517  35.670 -28.089  1.00 20.00   6
      ATOM   245  C    LEU B 102      102.906  37.663 -25.000  1.00 20.00   6
      ATOM   246  O    LEU B 102      104.000  37.137 -25.180  1.00 20.00   8
      ATOM   247  N    ALA B 103      102.760  38.828 -24.382  1.00 20.00   7
      ATOM   248  CA   ALA B 103      103.909  39.587 -23.910  1.00 20.00   6
 45   ATOM   249  CB   ALA B 103      103.464  41.002 -23.546  1.00 20.00   6
      ATOM   250  C    ALA B 103      104.697  38.983 -22.747  1.00 20.00   6
      ATOM   251  O    ALA B 103      105.832  39.389 -22.503  1.00 20.00   8
      ATOM   252  N    THR B 104      104.122  38.007 -22.050  1.00 20.00   7
      ATOM   253  CA   THR B 104      104.790  37.418 -20.893  1.00 20.00   6
 50   ATOM   254  CB   THR B 104      104.059  37.799 -19.592  1.00 20.00   6
      ATOM   255  OG1  THR B 104      102.712  37.303 -19.648  1.00 20.00   8
      ATOM   256  CG2  THR B 104      104.033  39.313 -19.404  1.00 20.00   6
      ATOM   257  C    THR B 104      104.880  35.902 -20.901  1.00 20.00   6
      ATOM   258  O    THR B 104      105.677  35.323 -20.160  1.00 20.00   8
 55   ATOM   259  N    SER B 105      104.042  35.274 -21.722  1.00 20.00   7
      ATOM   260  CA   SER B 105      103.950  33.818 -21.842  1.00 20.00   6
      ATOM   261  CB   SER B 105      105.344  33.213 -22.048  1.00 20.00   6
      ATOM   262  OG   SER B 105      105.264  31.819 -22.287  1.00 20.00   8
      ATOM   263  C    SER B 105      103.304  33.243 -20.576  1.00 20.00   6
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ATOM	264	O	SER	B	105	103.286	32.029	-20.363	1.00	20.00	8
ATOM	265	N	ARG	B	106	102.771	34.124	-19.736	1.00	20.00	7
ATOM	266	CA	ARG	B	106	102.089	33.709	-18.509	1.00	20.00	6
ATOM	267	CB	ARG	B	106	101.833	34.914	-17.598	1.00	20.00	6
ATOM	268	CG	ARG	B	106	103.022	35.361	-16.781	1.00	20.00	6
ATOM	269	CD	ARG	B	106	102.724	36.653	-16.045	1.00	20.00	6
ATOM	270	NE	ARG	B	106	103.756	36.940	-15.051	1.00	20.00	7
ATOM	271	CZ	ARG	B	106	103.964	38.132	-14.504	1.00	20.00	6
ATOM	272	NH1	ARG	B	106	103.210	39.167	-14.858	1.00	20.00	7
ATOM	273	NH2	ARG	B	106	104.918	38.279	-13.590	1.00	20.00	7
ATOM	274	C	ARG	B	106	100.743	33.082	-18.856	1.00	20.00	6
ATOM	275	O	ARG	B	106	100.069	33.534	-19.777	1.00	20.00	8
ATOM	276	N	GLU	B	107	100.354	32.049	-18.115	1.00	20.00	7
ATOM	277	CA	GLU	B	107	99.072	31.390	-18.336	1.00	20.00	6
ATOM	278	CB	GLU	B	107	99.193	29.870	-18.212	1.00	20.00	6
ATOM	279	CG	GLU	B	107	100.180	29.207	-19.144	1.00	20.00	6
ATOM	280	CD	GLU	B	107	100.124	27.696	-19.023	1.00	20.00	6
ATOM	281	OE1	GLU	B	107	99.373	27.068	-19.798	1.00	20.00	8
ATOM	282	OE2	GLU	B	107	100.813	27.144	-18.138	1.00	20.00	8
ATOM	283	C	GLU	B	107	98.070	31.848	-17.285	1.00	20.00	6
ATOM	284	O	GLU	B	107	98.368	31.833	-16.095	1.00	20.00	8
ATOM	285	N	TYR	B	108	96.885	32.243	-17.727	1.00	20.00	7
ATOM	286	CA	TYR	B	108	95.829	32.667	-16.817	1.00	20.00	6
ATOM	287	CB	TYR	B	108	95.525	34.156	-16.979	1.00	20.00	6
ATOM	288	CG	TYR	B	108	96.603	35.089	-16.487	1.00	20.00	6
ATOM	289	CD1	TYR	B	108	96.744	35.369	-15.129	1.00	20.00	6
ATOM	290	CE1	TYR	B	108	97.727	36.260	-14.674	1.00	20.00	6
ATOM	291	CD2	TYR	B	108	97.467	35.712	-17.386	1.00	20.00	6
ATOM	292	CE2	TYR	B	108	98.442	36.597	-16.950	1.00	20.00	6
ATOM	293	CZ	TYR	B	108	98.569	36.869	-15.599	1.00	20.00	6
ATOM	294	OH	TYR	B	108	99.529	37.756	-15.187	1.00	20.00	8
ATOM	295	C	TYR	B	108	94.566	31.899	-17.167	1.00	20.00	6
ATOM	296	O	TYR	B	108	94.389	31.463	-18.306	1.00	20.00	8
ATOM	297	N	ALA	B	109	93.697	31.723	-16.181	1.00	20.00	7
ATOM	298	CA	ALA	B	109	92.421	31.073	-16.414	1.00	20.00	6
ATOM	299	CB	ALA	B	109	92.024	30.225	-15.214	1.00	20.00	6
ATOM	300	C	ALA	B	109	91.513	32.288	-16.542	1.00	20.00	6
ATOM	301	O	ALA	B	109	91.278	33.003	-15.558	1.00	20.00	8
ATOM	302	N	ILE	B	110	91.042	32.557	-17.756	1.00	20.00	7
ATOM	303	CA	ILE	B	110	90.186	33.711	-17.968	1.00	20.00	6
ATOM	304	CB	ILE	B	110	90.574	34.462	-19.271	1.00	20.00	6
ATOM	305	CG2	ILE	B	110	89.628	35.630	-19.507	1.00	20.00	6
ATOM	306	CG1	ILE	B	110	92.023	34.962	-19.159	1.00	20.00	6
ATOM	307	CD1	ILE	B	110	92.487	35.847	-20.312	1.00	20.00	6
ATOM	308	C	ILE	B	110	88.715	33.318	-18.004	1.00	20.00	6
ATOM	309	O	ILE	B	110	88.285	32.527	-18.851	1.00	20.00	8
ATOM	310	N	LYS	B	111	87.956	33.852	-17.052	1.00	20.00	7
ATOM	311	CA	LYS	B	111	86.527	33.581	-16.975	1.00	20.00	6
ATOM	312	CB	LYS	B	111	86.022	33.721	-15.531	1.00	20.00	6
ATOM	313	CG	LYS	B	111	84.509	33.598	-15.411	1.00	20.00	6
ATOM	314	CD	LYS	B	111	84.025	33.590	-13.965	1.00	20.00	6
ATOM	315	CE	LYS	B	111	84.318	32.262	-13.277	1.00	20.00	6
ATOM	316	NZ	LYS	B	111	83.784	32.217	-11.875	1.00	20.00	7
ATOM	317	C	LYS	B	111	85.844	34.601	-17.869	1.00	20.00	6
ATOM	318	O	LYS	B	111	86.017	35.807	-17.688	1.00	20.00	8
ATOM	319	N	ILE	B	112	85.078	34.111	-18.838	1.00	20.00	7
ATOM	320	CA	ILE	B	112	84.383	34.976	-19.782	1.00	20.00	6
ATOM	321	CB	ILE	B	112	84.695	34.548	-21.233	1.00	20.00	6
ATOM	322	CG2	ILE	B	112	84.042	35.505	-22.216	1.00	20.00	6

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       ATOM    323  CG1 ILE B 112      86.216  34.518 -21.440  1.00 20.00   6
       ATOM    324  CD1 ILE B 112      86.657  33.949 -22.779  1.00 20.00   6
       ATOM    325  C   ILE B 112      82.878  34.916 -19.538  1.00 20.00   6
       ATOM    326  O   ILE B 112      82.288  33.839 -19.510  1.00 20.00   8
  5    ATOM    327  N   LEU B 113      82.269  36.083 -19.347  1.00 20.00   7
       ATOM    328  CA  LEU B 113      80.835  36.172 -19.089  1.00 20.00   6
       ATOM    329  CB  LEU B 113      80.585  36.696 -17.669  1.00 20.00   6
       ATOM    330  CG  LEU B 113      81.350  36.038 -16.521  1.00 20.00   6
       ATOM    331  CD1 LEU B 113      82.743  36.638 -16.428  1.00 20.00   6
 10    ATOM    332  CD2 LEU B 113      80.609  36.258 -15.215  1.00 20.00   6
       ATOM    333  C   LEU B 113      80.172  37.110 -20.090  1.00 20.00   6
       ATOM    334  O   LEU B 113      80.634  38.232 -20.299  1.00 20.00   8
       ATOM    335  N   GLU B 114      79.088  36.653 -20.709  1.00 20.00   7
       ATOM    336  CA  GLU B 114      78.377  37.472 -21.681  1.00 20.00   6
 15    ATOM    337  CB  GLU B 114      77.514  36.586 -22.581  1.00 20.00   6
       ATOM    338  CG  GLU B 114      76.670  37.366 -23.571  1.00 20.00   6
       ATOM    339  CD  GLU B 114      75.749  36.473 -24.372  1.00 20.00   6
       ATOM    340  OE1 GLU B 114      75.083  35.613 -23.760  1.00 20.00   8
       ATOM    341  OE2 GLU B 114      75.684  36.638 -25.611  1.00 20.00   8
 20    ATOM    342  C   GLU B 114      77.509  38.491 -20.942  1.00 20.00   6
       ATOM    343  O   GLU B 114      76.673  38.122 -20.113  1.00 20.00   8
       ATOM    344  N   LYS B 115      77.709  39.771 -21.235  1.00 20.00   7
       ATOM    345  CA  LYS B 115      76.945  40.808 -20.553  1.00 20.00   6
       ATOM    346  CB  LYS B 115      77.433  42.202 -20.978  1.00 20.00   6
 25    ATOM    347  CG  LYS B 115      78.653  42.675 -20.183  1.00 20.00   6
       ATOM    348  CD  LYS B 115      79.174  44.045 -20.618  1.00 20.00   6
       ATOM    349  CE  LYS B 115      79.832  43.994 -21.992  1.00 20.00   6
       ATOM    350  NZ  LYS B 115      80.536  45.273 -22.323  1.00 20.00   7
       ATOM    351  C   LYS B 115      75.435  40.693 -20.743  1.00 20.00   6
 30    ATOM    352  O   LYS B 115      74.676  40.787 -19.778  1.00 20.00   8
       ATOM    353  N   ARG B 116      74.997  40.471 -21.977  1.00 20.00   7
       ATOM    354  CA  ARG B 116      73.570  40.363 -22.255  1.00 20.00   6
       ATOM    355  CB  ARG B 116      73.346  40.066 -23.743  1.00 20.00   6
       ATOM    356  CG  ARG B 116      71.893  39.821 -24.142  1.00 20.00   6
 35    ATOM    357  CD  ARG B 116      70.931  40.791 -23.465  1.00 20.00   6
       ATOM    358  NE  ARG B 116      71.401  42.172 -23.493  1.00 20.00   7
       ATOM    359  CZ  ARG B 116      70.780  43.177 -22.884  1.00 20.00   6
       ATOM    360  NH1 ARG B 116      69.663  42.949 -22.207  1.00 20.00   7
       ATOM    361  NH2 ARG B 116      71.278  44.405 -22.942  1.00 20.00   7
 40    ATOM    362  C   ARG B 116      72.888  39.298 -21.394  1.00 20.00   6
       ATOM    363  O   ARG B 116      71.862  39.567 -20.764  1.00 20.00   8
       ATOM    364  N   HIS B 117      73.463  38.101 -21.347  1.00 20.00   7
       ATOM    365  CA  HIS B 117      72.885  37.020 -20.556  1.00 20.00   6
       ATOM    366  CB  HIS B 117      73.704  35.738 -20.723  1.00 20.00   6
 45    ATOM    367  CG  HIS B 117      73.053  34.525 -20.133  1.00 20.00   6
       ATOM    368  CD2 HIS B 117      71.762  34.274 -19.810  1.00 20.00   6
       ATOM    369  ND1 HIS B 117      73.752  33.376 -19.836  1.00 20.00   7
       ATOM    370  CE1 HIS B 117      72.921  32.467 -19.355  1.00 20.00   6
       ATOM    371  NE2 HIS B 117      71.707  32.987 -19.330  1.00 20.00   7
 50    ATOM    372  C   HIS B 117      72.816  37.386 -19.077  1.00 20.00   6
       ATOM    373  O   HIS B 117      71.823  37.113 -18.409  1.00 20.00   8
       ATOM    374  N   ILE B 118      73.882  37.992 -18.564  1.00 20.00   7
       ATOM    375  CA  ILE B 118      73.927  38.391 -17.160  1.00 20.00   6
       ATOM    376  CB  ILE B 118      75.269  39.073 -16.827  1.00 20.00   6
 55    ATOM    377  CG2 ILE B 118      75.180  39.787 -15.486  1.00 20.00   6
       ATOM    378  CG1 ILE B 118      76.392  38.029 -16.834  1.00 20.00   6
       ATOM    379  CD1 ILE B 118      77.784  38.625 -16.709  1.00 20.00   6
       ATOM    380  C   ILE B 118      72.788  39.353 -16.833  1.00 20.00   6
       ATOM    381  O   ILE B 118      72.101  39.196 -15.827  1.00 20.00   8
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     ATOM   382   N    ILE B 119     72.596  40.349 -17.690  1.00 20.00   7
     ATOM   383   CA   ILE B 119     71.538  41.333 -17.494  1.00 20.00   6
     ATOM   384   CB   ILE B 119     71.646  42.473 -18.539  1.00 20.00   6
     ATOM   385   CG2  ILE B 119     70.396  43.357 -18.492  1.00 20.00   6
  5  ATOM   386   CG1  ILE B 119     72.919  43.292 -18.270  1.00 20.00   6
     ATOM   387   CD1  ILE B 119     73.212  44.370 -19.314  1.00 20.00   6
     ATOM   388   C    ILE B 119     70.154  40.687 -17.580  1.00 20.00   6
     ATOM   389   O    ILE B 119     69.289  40.953 -16.747  1.00 20.00   8
     ATOM   390   N    LYS B 120     69.950  39.832 -18.579  1.00 20.00   7
 10  ATOM   391   CA   LYS B 120     68.659  39.169 -18.754  1.00 20.00   6
     ATOM   392   CB   LYS B 120     68.697  38.200 -19.935  1.00 20.00   6
     ATOM   393   CG   LYS B 120     68.942  38.841 -21.284  1.00 20.00   6
     ATOM   394   CD   LYS B 120     68.926  37.782 -22.387  1.00 20.00   6
     ATOM   395   CE   LYS B 120     69.934  36.665 -22.093  1.00 20.00   6
 15  ATOM   396   NZ   LYS B 120     69.950  35.599 -23.127  1.00 20.00   7
     ATOM   397   C    LYS B 120     68.229  38.398 -17.513  1.00 20.00   6
     ATOM   398   O    LYS B 120     67.077  38.490 -17.092  1.00 20.00   8
     ATOM   399   N    GLU B 121     69.154  37.639 -16.930  1.00 20.00   7
     ATOM   400   CA   GLU B 121     68.851  36.839 -15.747  1.00 20.00   6
 20  ATOM   401   CB   GLU B 121     69.678  35.549 -15.758  1.00 20.00   6
     ATOM   402   CG   GLU B 121     69.485  34.674 -16.995  1.00 20.00   6
     ATOM   403   CD   GLU B 121     68.029  34.326 -17.248  1.00 20.00   6
     ATOM   404   OE1  GLU B 121     67.339  33.904 -16.295  1.00 20.00   8
     ATOM   405   OE2  GLU B 121     67.574  34.470 -18.404  1.00 20.00   8
 25  ATOM   406   C    GLU B 121     69.071  37.573 -14.424  1.00 20.00   6
     ATOM   407   O    GLU B 121     69.117  36.946 -13.362  1.00 20.00   8
     ATOM   408   N    ASN B 122     69.208  38.895 -14.485  1.00 20.00   7
     ATOM   409   CA   ASN B 122     69.411  39.699 -13.291  1.00 20.00   6
     ATOM   410   CB   ASN B 122     68.132  39.715 -12.439  1.00 20.00   6
 30  ATOM   411   CG   ASN B 122     66.952  40.314 -13.177  1.00 20.00   6
     ATOM   412   OD1  ASN B 122     66.428  39.725 -14.121  1.00 20.00   8
     ATOM   413   ND2  ASN B 122     66.530  41.498 -12.748  1.00 20.00   7
     ATOM   414   C    ASN B 122     70.563  39.180 -12.419  1.00 20.00   6
     ATOM   415   O    ASN B 122     70.408  39.007 -11.212  1.00 20.00   8
 35  ATOM   416   N    LYS B 123     71.716  38.942 -13.033  1.00 20.00   7
     ATOM   417   CA   LYS B 123     72.870  38.434 -12.301  1.00 20.00   6
     ATOM   418   CB   LYS B 123     73.500  37.266 -13.065  1.00 20.00   6
     ATOM   419   CG   LYS B 123     72.568  36.086 -13.276  1.00 20.00   6
     ATOM   420   CD   LYS B 123     72.065  35.539 -11.948  1.00 20.00   6
 40  ATOM   421   CE   LYS B 123     71.032  34.445 -12.159  1.00 20.00   6
     ATOM   422   NZ   LYS B 123     70.421  34.016 -10.871  1.00 20.00   7
     ATOM   423   C    LYS B 123     73.931  39.498 -12.054  1.00 20.00   6
     ATOM   424   O    LYS B 123     75.035  39.183 -11.611  1.00 20.00   8
     ATOM   425   N    VAL B 124     73.607  40.753 -12.340  1.00 20.00   7
 45  ATOM   426   CA   VAL B 124     74.575  41.822 -12.145  1.00 20.00   6
     ATOM   427   CB   VAL B 124     73.997  43.201 -12.547  1.00 20.00   6
     ATOM   428   CG1  VAL B 124     75.035  44.290 -12.302  1.00 20.00   6
     ATOM   429   CG2  VAL B 124     73.608  43.186 -14.022  1.00 20.00   6
     ATOM   430   C    VAL B 124     75.091  41.885 -10.712  1.00 20.00   6
 50  ATOM   431   O    VAL B 124     76.278  42.115 -10.490  1.00 20.00   8
     ATOM   432   N    PRO B 125     74.207  41.695  -9.716  1.00 20.00   7
     ATOM   433   CD   PRO B 125     72.735  41.613  -9.757  1.00 20.00   6
     ATOM   434   CA   PRO B 125     74.688  41.747  -8.331  1.00 20.00   6
     ATOM   435   CB   PRO B 125     73.411  41.558  -7.512  1.00 20.00   6
 55  ATOM   436   CG   PRO B 125     72.346  42.152  -8.396  1.00 20.00   6
     ATOM   437   C    PRO B 125     75.715  40.643  -8.051  1.00 20.00   6
     ATOM   438   O    PRO B 125     76.683  40.851  -7.325  1.00 20.00   8
     ATOM   439   N    TYR B 126     75.493  39.475  -8.640  1.00 20.00   7
     ATOM   440   CA   TYR B 126     76.380  38.334  -8.440  1.00 20.00   6
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      ATOM    441  CB  TYR B 126      75.699  37.059  -8.942  1.00 20.00      6
      ATOM    442  CG  TYR B 126      74.479  36.687  -8.127  1.00 20.00      6
      ATOM    443  CD1 TYR B 126      74.611  36.068  -6.884  1.00 20.00      6
      ATOM    444  CE1 TYR B 126      73.491  35.748  -6.112  1.00 20.00      6
   5  ATOM    445  CD2 TYR B 126      73.193  36.981  -8.583  1.00 20.00      6
      ATOM    446  CE2 TYR B 126      72.063  36.667  -7.817  1.00 20.00      6
      ATOM    447  CZ  TYR B 126      72.223  36.052  -6.584  1.00 20.00      6
      ATOM    448  OH  TYR B 126      71.118  35.743  -5.823  1.00 20.00      8
      ATOM    449  C   TYR B 126      77.738  38.511  -9.113  1.00 20.00      6
  10  ATOM    450  O   TYR B 126      78.777  38.273  -8.492  1.00 20.00      8
      ATOM    451  N   VAL B 127      77.738  38.931 -10.374  1.00 20.00      7
      ATOM    452  CA  VAL B 127      78.994  39.123 -11.085  1.00 20.00      6
      ATOM    453  CB  VAL B 127      78.756  39.466 -12.567  1.00 20.00      6
      ATOM    454  CG1 VAL B 127      80.096  39.637 -13.275  1.00 20.00      6
  15  ATOM    455  CG2 VAL B 127      77.949  38.357 -13.234  1.00 20.00      6
      ATOM    456  C   VAL B 127      79.798  40.242 -10.427  1.00 20.00      6
      ATOM    457  O   VAL B 127      81.016  40.148 -10.292  1.00 20.00      8
      ATOM    458  N   THR B 128      79.105  41.293 -10.006  1.00 20.00      7
      ATOM    459  CA  THR B 128      79.746  42.424  -9.345  1.00 20.00      6
  20  ATOM    460  CB  THR B 128      78.721  43.548  -9.070  1.00 20.00      6
      ATOM    461  OG1 THR B 128      78.194  44.025 -10.316  1.00 20.00      8
      ATOM    462  CG2 THR B 128      79.371  44.703  -8.330  1.00 20.00      6
      ATOM    463  C   THR B 128      80.372  41.979  -8.019  1.00 20.00      6
      ATOM    464  O   THR B 128      81.500  42.355  -7.696  1.00 20.00      8
  25  ATOM    465  N   ARG B 129      79.637  41.172  -7.256  1.00 20.00      7
      ATOM    466  CA  ARG B 129      80.126  40.678  -5.971  1.00 20.00      6
      ATOM    467  CB  ARG B 129      79.035  39.888  -5.254  1.00 20.00      6
      ATOM    468  CG  ARG B 129      79.428  39.438  -3.852  1.00 20.00      6
      ATOM    469  CD  ARG B 129      78.351  38.554  -3.278  1.00 20.00      6
  30  ATOM    470  NE  ARG B 129      77.048  39.209  -3.315  1.00 20.00      7
      ATOM    471  CZ  ARG B 129      75.894  38.569  -3.484  1.00 20.00      6
      ATOM    472  NH1 ARG B 129      75.878  37.250  -3.636  1.00 20.00      7
      ATOM    473  NH2 ARG B 129      74.756  39.248  -3.501  1.00 20.00      7
      ATOM    474  C   ARG B 129      81.354  39.788  -6.146  1.00 20.00      6
  35  ATOM    475  O   ARG B 129      82.315  39.885  -5.379  1.00 20.00      8
      ATOM    476  N   GLU B 130      81.316  38.917  -7.151  1.00 20.00      7
      ATOM    477  CA  GLU B 130      82.439  38.029  -7.421  1.00 20.00      6
      ATOM    478  CB  GLU B 130      82.191  37.211  -8.692  1.00 20.00      6
      ATOM    479  CG  GLU B 130      83.408  36.427  -9.167  1.00 20.00      6
  40  ATOM    480  CD  GLU B 130      83.060  35.338 -10.168  1.00 20.00      6
      ATOM    481  OE1 GLU B 130      82.227  35.590 -11.061  1.00 20.00      8
      ATOM    482  OE2 GLU B 130      83.626  34.231 -10.068  1.00 20.00      8
      ATOM    483  C   GLU B 130      83.708  38.853  -7.580  1.00 20.00      6
      ATOM    484  O   GLU B 130      84.723  38.575  -6.940  1.00 20.00      8
  45  ATOM    485  N   ARG B 131      83.641  39.874  -8.428  1.00 20.00      7
      ATOM    486  CA  ARG B 131      84.788  40.742  -8.673  1.00 20.00      6
      ATOM    487  CB  ARG B 131      84.459  41.759  -9.777  1.00 20.00      6
      ATOM    488  CG  ARG B 131      85.580  42.753 -10.035  1.00 20.00      6
      ATOM    489  CD  ARG B 131      85.262  43.716 -11.167  1.00 20.00      6
  50  ATOM    490  NE  ARG B 131      86.351  44.673 -11.355  1.00 20.00      7
      ATOM    491  CZ  ARG B 131      86.416  45.561 -12.343  1.00 20.00      6
      ATOM    492  NH1 ARG B 131      85.450  45.623 -13.250  1.00 20.00      7
      ATOM    493  NH2 ARG B 131      87.460  46.388 -12.426  1.00 20.00      7
      ATOM    494  C   ARG B 131      85.228  41.485  -7.409  1.00 20.00      6
  55  ATOM    495  O   ARG B 131      86.413  41.500  -7.071  1.00 20.00      8
      ATOM    496  N   ASP B 132      84.277  42.103  -6.715  1.00 20.00      7
      ATOM    497  CA  ASP B 132      84.594  42.848  -5.505  1.00 20.00      6
      ATOM    498  CB  ASP B 132      83.350  43.575  -4.987  1.00 20.00      6
      ATOM    499  CG  ASP B 132      82.865  44.658  -5.943  1.00 20.00      6
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	ATOM	500	OD1	ASP	B	132	83.612	45.010	-6.886	1.00	20.00	8
	ATOM	501	OD2	ASP	B	132	81.739	45.167	-5.747	1.00	20.00	8
	ATOM	502	C	ASP	B	132	85.192	41.969	-4.401	1.00	20.00	6
	ATOM	503	O	ASP	B	132	86.191	42.337	-3.783	1.00	20.00	8
5	ATOM	504	N	VAL	B	133	84.596	40.809	-4.150	1.00	20.00	7
	ATOM	505	CA	VAL	B	133	85.131	39.933	-3.116	1.00	20.00	6
	ATOM	506	CB	VAL	B	133	84.226	38.698	-2.885	1.00	20.00	6
	ATOM	507	CG1	VAL	B	133	84.920	37.713	-1.957	1.00	20.00	6
	ATOM	508	CG2	VAL	B	133	82.893	39.135	-2.271	1.00	20.00	6
10	ATOM	509	C	VAL	B	133	86.540	39.470	-3.477	1.00	20.00	6
	ATOM	510	O	VAL	B	133	87.460	39.602	-2.675	1.00	20.00	8
	ATOM	511	N	MET	B	134	86.721	38.950	-4.688	1.00	20.00	7
	ATOM	512	CA	MET	B	134	88.040	38.474	-5.083	1.00	20.00	6
	ATOM	513	CB	MET	B	134	88.004	37.879	-6.492	1.00	20.00	6
15	ATOM	514	CG	MET	B	134	87.183	36.603	-6.573	1.00	20.00	6
	ATOM	515	SD	MET	B	134	87.477	35.650	-8.077	1.00	20.00	16
	ATOM	516	CE	MET	B	134	88.730	34.515	-7.475	1.00	20.00	6
	ATOM	517	C	MET	B	134	89.115	39.552	-4.994	1.00	20.00	6
	ATOM	518	O	MET	B	134	90.253	39.264	-4.626	1.00	20.00	8
20	ATOM	519	N	SER	B	135	88.758	40.790	-5.319	1.00	20.00	7
	ATOM	520	CA	SER	B	135	89.708	41.899	-5.260	1.00	20.00	6
	ATOM	521	CB	SER	B	135	89.084	43.175	-5.836	1.00	20.00	6
	ATOM	522	OG	SER	B	135	88.742	43.009	-7.202	1.00	20.00	8
	ATOM	523	C	SER	B	135	90.165	42.184	-3.830	1.00	20.00	6
25	ATOM	524	O	SER	B	135	91.228	42.762	-3.614	1.00	20.00	8
	ATOM	525	N	ARG	B	136	89.354	41.782	-2.857	1.00	20.00	7
	ATOM	526	CA	ARG	B	136	89.672	42.013	-1.450	1.00	20.00	6
	ATOM	527	CB	ARG	B	136	88.384	42.156	-0.637	1.00	20.00	6
	ATOM	528	CG	ARG	B	136	87.509	43.336	-1.018	1.00	20.00	6
30	ATOM	529	CD	ARG	B	136	86.215	43.306	-0.211	1.00	20.00	6
	ATOM	530	NE	ARG	B	136	86.491	43.117	1.209	1.00	20.00	7
	ATOM	531	CZ	ARG	B	136	85.565	42.888	2.132	1.00	20.00	6
	ATOM	532	NH1	ARG	B	136	84.285	42.821	1.786	1.00	20.00	7
	ATOM	533	NH2	ARG	B	136	85.920	42.715	3.401	1.00	20.00	7
35	ATOM	534	C	ARG	B	136	90.506	40.891	-0.839	1.00	20.00	6
	ATOM	535	O	ARG	B	136	91.091	41.054	0.231	1.00	20.00	8
	ATOM	536	N	LEU	B	137	90.556	39.752	-1.515	1.00	20.00	7
	ATOM	537	CA	LEU	B	137	91.300	38.609	-1.005	1.00	20.00	6
	ATOM	538	CB	LEU	B	137	90.665	37.307	-1.504	1.00	20.00	6
40	ATOM	539	CG	LEU	B	137	89.172	37.099	-1.213	1.00	20.00	6
	ATOM	540	CD1	LEU	B	137	88.748	35.728	-1.734	1.00	20.00	6
	ATOM	541	CD2	LEU	B	137	88.897	37.205	0.280	1.00	20.00	6
	ATOM	542	C	LEU	B	137	92.771	38.648	-1.402	1.00	20.00	6
	ATOM	543	O	LEU	B	137	93.103	38.871	-2.566	1.00	20.00	8
45	ATOM	544	N	ASP	B	138	93.645	38.436	-0.424	1.00	20.00	7
	ATOM	545	CA	ASP	B	138	95.086	38.422	-0.656	1.00	20.00	6
	ATOM	546	CB	ASP	B	138	95.696	39.797	-0.352	1.00	20.00	6
	ATOM	547	CG	ASP	B	138	97.179	39.854	-0.674	1.00	20.00	6
	ATOM	548	OD1	ASP	B	138	97.601	39.173	-1.634	1.00	20.00	8
50	ATOM	549	OD2	ASP	B	138	97.920	40.581	0.022	1.00	20.00	8
	ATOM	550	C	ASP	B	138	95.678	37.369	0.263	1.00	20.00	6
	ATOM	551	O	ASP	B	138	96.353	37.685	1.243	1.00	20.00	8
	ATOM	552	N	HIS	B	139	95.410	36.111	-0.065	1.00	20.00	7
	ATOM	553	CA	HIS	B	139	95.871	34.984	0.731	1.00	20.00	6
55	ATOM	554	CB	HIS	B	139	94.769	34.610	1.737	1.00	20.00	6
	ATOM	555	CG	HIS	B	139	95.173	33.561	2.725	1.00	20.00	6
	ATOM	556	CD2	HIS	B	139	95.543	33.657	4.025	1.00	20.00	6
	ATOM	557	ND1	HIS	B	139	95.241	32.221	2.405	1.00	20.00	7
	ATOM	558	CE1	HIS	B	139	95.635	31.537	3.466	1.00	20.00	6

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       ATOM    559  NE2 HIS B 139      95.825  32.385   4.461  1.00 20.00   7
       ATOM    560  C   HIS B 139      96.176  33.828  -0.221  1.00 20.00   6
       ATOM    561  O   HIS B 139      95.444  33.595  -1.182  1.00 20.00   8
       ATOM    562  N   PRO B 140      97.257  33.080   0.038  1.00 20.00   7
   5   ATOM    563  CD  PRO B 140      98.128  33.140   1.225  1.00 20.00   6
       ATOM    564  CA  PRO B 140      97.635  31.959  -0.827  1.00 20.00   6
       ATOM    565  CB  PRO B 140      98.913  31.433  -0.171  1.00 20.00   6
       ATOM    566  CG  PRO B 140      98.687  31.730   1.277  1.00 20.00   6
       ATOM    567  C   PRO B 140      96.614  30.846  -1.072  1.00 20.00   6
  10   ATOM    568  O   PRO B 140      96.747  30.107  -2.044  1.00 20.00   8
       ATOM    569  N   PHE B 141      95.607  30.712  -0.211  1.00 20.00   7
       ATOM    570  CA  PHE B 141      94.620  29.649  -0.398  1.00 20.00   6
       ATOM    571  CB  PHE B 141      94.206  29.056   0.961  1.00 20.00   6
       ATOM    572  CG  PHE B 141      95.321  28.335   1.681  1.00 20.00   6
  15   ATOM    573  CD1 PHE B 141      96.351  27.716   0.967  1.00 20.00   6
       ATOM    574  CD2 PHE B 141      95.311  28.227   3.067  1.00 20.00   6
       ATOM    575  CE1 PHE B 141      97.350  27.000   1.627  1.00 20.00   6
       ATOM    576  CE2 PHE B 141      96.307  27.510   3.740  1.00 20.00   6
       ATOM    577  CZ  PHE B 141      97.328  26.895   3.018  1.00 20.00   6
  20   ATOM    578  C   PHE B 141      93.371  30.063  -1.181  1.00 20.00   6
       ATOM    579  O   PHE B 141      92.335  29.398  -1.114  1.00 20.00   8
       ATOM    580  N   PHE B 142      93.471  31.150  -1.934  1.00 20.00   7
       ATOM    581  CA  PHE B 142      92.337  31.625  -2.721  1.00 20.00   6
       ATOM    582  CB  PHE B 142      91.739  32.883  -2.082  1.00 20.00   6
  25   ATOM    583  CG  PHE B 142      91.048  32.628  -0.772  1.00 20.00   6
       ATOM    584  CD1 PHE B 142      89.715  32.227  -0.740  1.00 20.00   6
       ATOM    585  CD2 PHE B 142      91.741  32.747   0.429  1.00 20.00   6
       ATOM    586  CE1 PHE B 142      89.080  31.944   0.472  1.00 20.00   6
       ATOM    587  CE2 PHE B 142      91.116  32.465   1.647  1.00 20.00   6
  30   ATOM    588  CZ  PHE B 142      89.785  32.064   1.667  1.00 20.00   6
       ATOM    589  C   PHE B 142      92.758  31.945  -4.146  1.00 20.00   6
       ATOM    590  O   PHE B 142      93.865  32.429  -4.371  1.00 20.00   8
       ATOM    591  N   VAL B 143      91.883  31.653  -5.106  1.00 20.00   7
       ATOM    592  CA  VAL B 143      92.167  31.960  -6.504  1.00 20.00   6
  35   ATOM    593  CB  VAL B 143      91.009  31.513  -7.435  1.00 20.00   6
       ATOM    594  CG1 VAL B 143      91.116  32.209  -8.795  1.00 20.00   6
       ATOM    595  CG2 VAL B 143      91.061  30.000  -7.623  1.00 20.00   6
       ATOM    596  C   VAL B 143      92.301  33.469  -6.545  1.00 20.00   6
       ATOM    597  O   VAL B 143      91.505  34.179  -5.932  1.00 20.00   8
  40   ATOM    598  N   LYS B 144      93.312  33.957  -7.252  1.00 20.00   7
       ATOM    599  CA  LYS B 144      93.547  35.392  -7.340  1.00 20.00   6
       ATOM    600  CB  LYS B 144      95.051  35.689  -7.267  1.00 20.00   6
       ATOM    601  CG  LYS B 144      95.382  37.182  -7.318  1.00 20.00   6
       ATOM    602  CD  LYS B 144      96.881  37.441  -7.201  1.00 20.00   6
  45   ATOM    603  CE  LYS B 144      97.191  38.936  -7.298  1.00 20.00   6
       ATOM    604  NZ  LYS B 144      98.661  39.215  -7.246  1.00 20.00   7
       ATOM    605  C   LYS B 144      92.989  36.003  -8.614  1.00 20.00   6
       ATOM    606  O   LYS B 144      92.993  35.371  -9.675  1.00 20.00   8
       ATOM    607  N   LEU B 145      92.495  37.230  -8.490  1.00 20.00   7
  50   ATOM    608  CA  LEU B 145      91.968  37.975  -9.624  1.00 20.00   6
       ATOM    609  CB  LEU B 145      90.678  38.703  -9.234  1.00 20.00   6
       ATOM    610  CG  LEU B 145      89.938  39.486 -10.326  1.00 20.00   6
       ATOM    611  CD1 LEU B 145      88.611  39.992  -9.782  1.00 20.00   6
       ATOM    612  CD2 LEU B 145      90.791  40.652 -10.806  1.00 20.00   6
  55   ATOM    613  C   LEU B 145      93.059  38.984  -9.968  1.00 20.00   6
       ATOM    614  O   LEU B 145      93.291  39.940  -9.216  1.00 20.00   8
       ATOM    615  N   TYR B 146      93.735  38.771 -11.093  1.00 20.00   7
       ATOM    616  CA  TYR B 146      94.815  39.657 -11.517  1.00 20.00   6
       ATOM    617  CB  TYR B 146      95.821  38.904 -12.389  1.00 20.00   6
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     ATOM    618   CG   TYR B 146      96.624  37.858 -11.661  1.00 20.00    6
     ATOM    619   CD1  TYR B 146      96.139  36.559 -11.498  1.00 20.00    6
     ATOM    620   CE1  TYR B 146      96.894  35.589 -10.836  1.00 20.00    6
     ATOM    621   CD2  TYR B 146      97.878  38.165 -11.140  1.00 20.00    6
  5  ATOM    622   CE2  TYR B 146      98.639  37.208 -10.476  1.00 20.00    6
     ATOM    623   CZ   TYR B 146      98.144  35.925 -10.331  1.00 20.00    6
     ATOM    624   OH   TYR B 146      98.920  34.981  -9.706  1.00 20.00    8
     ATOM    625   C    TYR B 146      94.357  40.884 -12.293  1.00 20.00    6
     ATOM    626   O    TYR B 146      94.933  41.963 -12.160  1.00 20.00    8
 10  ATOM    627   N    PHE B 147      93.326  40.722 -13.110  1.00 20.00    7
     ATOM    628   CA   PHE B 147      92.855  41.832 -13.923  1.00 20.00    6
     ATOM    629   CB   PHE B 147      93.823  42.044 -15.092  1.00 20.00    6
     ATOM    630   CG   PHE B 147      94.027  40.809 -15.945  1.00 20.00    6
     ATOM    631   CD1  PHE B 147      93.049  40.397 -16.850  1.00 20.00    6
 15  ATOM    632   CD2  PHE B 147      95.188  40.047 -15.822  1.00 20.00    6
     ATOM    633   CE1  PHE B 147      93.221  39.247 -17.617  1.00 20.00    6
     ATOM    634   CE2  PHE B 147      95.372  38.893 -16.585  1.00 20.00    6
     ATOM    635   CZ   PHE B 147      94.388  38.490 -17.485  1.00 20.00    6
     ATOM    636   C    PHE B 147      91.473  41.566 -14.480  1.00 20.00    6
 20  ATOM    637   O    PHE B 147      90.972  40.442 -14.423  1.00 20.00    8
     ATOM    638   N    THR B 148      90.865  42.616 -15.021  1.00 20.00    7
     ATOM    639   CA   THR B 148      89.560  42.509 -15.643  1.00 20.00    6
     ATOM    640   CB   THR B 148      88.402  42.889 -14.678  1.00 20.00    6
     ATOM    641   OG1  THR B 148      88.492  44.275 -14.338  1.00 20.00    8
 25  ATOM    642   CG2  THR B 148      88.460  42.057 -13.403  1.00 20.00    6
     ATOM    643   C    THR B 148      89.532  43.469 -16.821  1.00 20.00    6
     ATOM    644   O    THR B 148      90.281  44.448 -16.866  1.00 20.00    8
     ATOM    645   N    PHE B 149      88.685  43.161 -17.791  1.00 20.00    7
     ATOM    646   CA   PHE B 149      88.508  44.011 -18.948  1.00 20.00    6
 30  ATOM    647   CB   PHE B 149      89.750  44.013 -19.864  1.00 20.00    6
     ATOM    648   CG   PHE B 149      90.133  42.664 -20.419  1.00 20.00    6
     ATOM    649   CD1  PHE B 149      89.552  42.182 -21.587  1.00 20.00    6
     ATOM    650   CD2  PHE B 149      91.122  41.903 -19.802  1.00 20.00    6
     ATOM    651   CE1  PHE B 149      89.953  40.965 -22.142  1.00 20.00    6
 35  ATOM    652   CE2  PHE B 149      91.532  40.681 -20.345  1.00 20.00    6
     ATOM    653   CZ   PHE B 149      90.948  40.213 -21.517  1.00 20.00    6
     ATOM    654   C    PHE B 149      87.271  43.498 -19.649  1.00 20.00    6
     ATOM    655   O    PHE B 149      86.714  42.474 -19.251  1.00 20.00    8
     ATOM    656   N    GLN B 150      86.812  44.221 -20.657  1.00 20.00    7
 40  ATOM    657   CA   GLN B 150      85.619  43.807 -21.372  1.00 20.00    6
     ATOM    658   CB   GLN B 150      84.358  44.260 -20.614  1.00 20.00    6
     ATOM    659   CG   GLN B 150      84.302  45.761 -20.289  1.00 20.00    6
     ATOM    660   CD   GLN B 150      83.011  46.172 -19.567  1.00 20.00    6
     ATOM    661   OE1  GLN B 150      81.970  46.385 -20.196  1.00 20.00    8
 45  ATOM    662   NE2  GLN B 150      83.078  46.273 -18.240  1.00 20.00    7
     ATOM    663   C    GLN B 150      85.598  44.400 -22.760  1.00 20.00    6
     ATOM    664   O    GLN B 150      86.281  45.387 -23.033  1.00 20.00    8
     ATOM    665   N    ASP B 151      84.846  43.766 -23.649  1.00 20.00    7
     ATOM    666   CA   ASP B 151      84.683  44.296 -24.992  1.00 20.00    6
 50  ATOM    667   CB   ASP B 151      85.160  43.312 -26.074  1.00 20.00    6
     ATOM    668   CG   ASP B 151      84.558  41.934 -25.939  1.00 20.00    6
     ATOM    669   OD1  ASP B 151      83.425  41.812 -25.436  1.00 20.00    8
     ATOM    670   OD2  ASP B 151      85.227  40.963 -26.365  1.00 20.00    8
     ATOM    671   C    ASP B 151      83.188  44.573 -25.095  1.00 20.00    6
 55  ATOM    672   O    ASP B 151      82.501  44.610 -24.069  1.00 20.00    8
     ATOM    673   N    ASP B 152      82.669  44.758 -26.301  1.00 20.00    7
     ATOM    674   CA   ASP B 152      81.251  45.062 -26.437  1.00 20.00    6
     ATOM    675   CB   ASP B 152      80.907  45.346 -27.901  1.00 20.00    6
     ATOM    676   CG   ASP B 152      81.616  46.574 -28.432  1.00 20.00    6
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      ATOM    677   OD1 ASP B 152       81.748  47.555 -27.666  1.00 20.00   8
      ATOM    678   OD2 ASP B 152       82.030  46.563 -29.613  1.00 20.00   8
      ATOM    679   C   ASP B 152       80.285  44.020 -25.888  1.00 20.00   6
      ATOM    680   O   ASP B 152       79.229  44.367 -25.357  1.00 20.00   8
  5   ATOM    681   N   GLU B 153       80.641  42.747 -25.982  1.00 20.00   7
      ATOM    682   CA  GLU B 153       79.727  41.711 -25.521  1.00 20.00   6
      ATOM    683   CB  GLU B 153       79.516  40.685 -26.641  1.00 20.00   6
      ATOM    684   CG  GLU B 153       79.577  41.260 -28.058  1.00 20.00   6
      ATOM    685   CD  GLU B 153       81.006  41.472 -28.550  1.00 20.00   6
 10   ATOM    686   OE1 GLU B 153       81.765  40.480 -28.635  1.00 20.00   8
      ATOM    687   OE2 GLU B 153       81.374  42.627 -28.854  1.00 20.00   8
      ATOM    688   C   GLU B 153       80.102  40.960 -24.247  1.00 20.00   6
      ATOM    689   O   GLU B 153       79.222  40.473 -23.535  1.00 20.00   8
      ATOM    690   N   LYS B 154       81.393  40.869 -23.944  1.00 20.00   7
 15   ATOM    691   CA  LYS B 154       81.818  40.091 -22.787  1.00 20.00   6
      ATOM    692   CB  LYS B 154       82.549  38.830 -23.273  1.00 20.00   6
      ATOM    693   CG  LYS B 154       81.785  37.978 -24.278  1.00 20.00   6
      ATOM    694   CD  LYS B 154       82.727  37.028 -25.021  1.00 20.00   6
      ATOM    695   CE  LYS B 154       81.968  36.086 -25.952  1.00 20.00   6
 20   ATOM    696   NZ  LYS B 154       82.894  35.300 -26.826  1.00 20.00   7
      ATOM    697   C   LYS B 154       82.709  40.767 -21.756  1.00 20.00   6
      ATOM    698   O   LYS B 154       83.412  41.740 -22.048  1.00 20.00   8
      ATOM    699   N   LEU B 155       82.677  40.202 -20.551  1.00 20.00   7
      ATOM    700   CA  LEU B 155       83.501  40.638 -19.428  1.00 20.00   6
 25   ATOM    701   CB  LEU B 155       82.700  40.651 -18.127  1.00 20.00   6
      ATOM    702   CG  LEU B 155       81.451  41.521 -18.004  1.00 20.00   6
      ATOM    703   CD1 LEU B 155       80.805  41.273 -16.645  1.00 20.00   6
      ATOM    704   CD2 LEU B 155       81.831  42.983 -18.152  1.00 20.00   6
      ATOM    705   C   LEU B 155       84.578  39.559 -19.302  1.00 20.00   6
 30   ATOM    706   O   LEU B 155       84.288  38.379 -19.495  1.00 20.00   8
      ATOM    707   N   TYR B 156       85.802  39.956 -18.966  1.00 20.00   7
      ATOM    708   CA  TYR B 156       86.893  38.998 -18.809  1.00 20.00   6
      ATOM    709   CB  TYR B 156       87.953  39.189 -19.904  1.00 20.00   6
      ATOM    710   CG  TYR B 156       87.450  39.053 -21.324  1.00 20.00   6
 35   ATOM    711   CD1 TYR B 156       86.688  40.061 -21.920  1.00 20.00   6
      ATOM    712   CE1 TYR B 156       86.233  39.938 -23.235  1.00 20.00   6
      ATOM    713   CD2 TYR B 156       87.741  37.917 -22.077  1.00 20.00   6
      ATOM    714   CE2 TYR B 156       87.288  37.782 -23.387  1.00 20.00   6
      ATOM    715   CZ  TYR B 156       86.538  38.794 -23.958  1.00 20.00   6
 40   ATOM    716   OH  TYR B 156       86.087  38.656 -25.246  1.00 20.00   8
      ATOM    717   C   TYR B 156       87.566  39.182 -17.447  1.00 20.00   6
      ATOM    718   O   TYR B 156       87.977  40.291 -17.110  1.00 20.00   8
      ATOM    719   N   PHE B 157       87.657  38.104 -16.667  1.00 20.00   7
      ATOM    720   CA  PHE B 157       88.325  38.152 -15.367  1.00 20.00   6
 45   ATOM    721   CB  PHE B 157       87.448  37.575 -14.246  1.00 20.00   6
      ATOM    722   CG  PHE B 157       86.194  38.360 -13.968  1.00 20.00   6
      ATOM    723   CD1 PHE B 157       85.986  39.614 -14.535  1.00 20.00   6
      ATOM    724   CD2 PHE B 157       85.206  37.828 -13.143  1.00 20.00   6
      ATOM    725   CE1 PHE B 157       84.808  40.324 -14.290  1.00 20.00   6
 50   ATOM    726   CE2 PHE B 157       84.025  38.532 -12.893  1.00 20.00   6
      ATOM    727   CZ  PHE B 157       83.829  39.782 -13.470  1.00 20.00   6
      ATOM    728   C   PHE B 157       89.579  37.295 -15.471  1.00 20.00   6
      ATOM    729   O   PHE B 157       89.492  36.105 -15.765  1.00 20.00   8
      ATOM    730   N   GLY B 158       90.742  37.893 -15.231  1.00 20.00   7
 55   ATOM    731   CA  GLY B 158       91.985  37.146 -15.303  1.00 20.00   6
      ATOM    732   C   GLY B 158       92.254  36.512 -13.955  1.00 20.00   6
      ATOM    733   O   GLY B 158       92.575  37.211 -12.996  1.00 20.00   8
      ATOM    734   N   LEU B 159       92.137  35.191 -13.886  1.00 20.00   7
      ATOM    735   CA  LEU B 159       92.330  34.466 -12.634  1.00 20.00   6
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     ATOM    736  CB   LEU B 159       91.116  33.580 -12.358  1.00 20.00   6
     ATOM    737  CG   LEU B 159       89.724  34.208 -12.490  1.00 20.00   6
     ATOM    738  CD1  LEU B 159       88.670  33.111 -12.398  1.00 20.00   6
     ATOM    739  CD2  LEU B 159       89.513  35.246 -11.404  1.00 20.00   6
  5  ATOM    740  C    LEU B 159       93.562  33.582 -12.643  1.00 20.00   6
     ATOM    741  O    LEU B 159       94.061  33.204 -13.698  1.00 20.00   8
     ATOM    742  N    SER B 160       94.046  33.237 -11.457  1.00 20.00   7
     ATOM    743  CA   SER B 160       95.192  32.356 -11.377  1.00 20.00   6
     ATOM    744  CB   SER B 160       95.665  32.206  -9.926  1.00 20.00   6
 10  ATOM    745  OG   SER B 160       94.591  31.973  -9.042  1.00 20.00   8
     ATOM    746  C    SER B 160       94.754  31.012 -11.951  1.00 20.00   6
     ATOM    747  O    SER B 160       93.598  30.605 -11.813  1.00 20.00   8
     ATOM    748  N    TYR B 161       95.674  30.339 -12.625  1.00 20.00   7
     ATOM    749  CA   TYR B 161       95.381  29.050 -13.231  1.00 20.00   6
 15  ATOM    750  CB   TYR B 161       96.170  28.924 -14.543  1.00 20.00   6
     ATOM    751  CG   TYR B 161       96.128  27.564 -15.209  1.00 20.00   6
     ATOM    752  CD1  TYR B 161       94.968  26.787 -15.193  1.00 20.00   6
     ATOM    753  CE1  TYR B 161       94.915  25.554 -15.846  1.00 20.00   6
     ATOM    754  CD2  TYR B 161       97.240  27.073 -15.895  1.00 20.00   6
 20  ATOM    755  CE2  TYR B 161       97.198  25.841 -16.553  1.00 20.00   6
     ATOM    756  CZ   TYR B 161       96.033  25.088 -16.523  1.00 20.00   6
     ATOM    757  OH   TYR B 161       95.983  23.877 -17.173  1.00 20.00   8
     ATOM    758  C    TYR B 161       95.724  27.905 -12.277  1.00 20.00   6
     ATOM    759  O    TYR B 161       96.897  27.598 -12.065  1.00 20.00   8
 25  ATOM    760  N    ALA B 162       94.696  27.288 -11.697  1.00 20.00   7
     ATOM    761  CA   ALA B 162       94.893  26.166 -10.776  1.00 20.00   6
     ATOM    762  CB   ALA B 162       93.666  25.995  -9.873  1.00 20.00   6
     ATOM    763  C    ALA B 162       95.100  24.924 -11.637  1.00 20.00   6
     ATOM    764  O    ALA B 162       94.146  24.251 -12.015  1.00 20.00   8
 30  ATOM    765  N    LYS B 163       96.361  24.626 -11.930  1.00 20.00   7
     ATOM    766  CA   LYS B 163       96.722  23.506 -12.795  1.00 20.00   6
     ATOM    767  CB   LYS B 163       98.247  23.416 -12.912  1.00 20.00   6
     ATOM    768  CG   LYS B 163       98.904  24.711 -13.360  1.00 20.00   6
     ATOM    769  CD   LYS B 163      100.405  24.539 -13.554  1.00 20.00   6
 35  ATOM    770  CE   LYS B 163      101.102  25.885 -13.690  1.00 20.00   6
     ATOM    771  NZ   LYS B 163      100.976  26.701 -12.445  1.00 20.00   7
     ATOM    772  C    LYS B 163       96.170  22.123 -12.464  1.00 20.00   6
     ATOM    773  O    LYS B 163       95.823  21.370 -13.369  1.00 20.00   8
     ATOM    774  N    ASN B 164       96.076  21.775 -11.186  1.00 20.00   7
 40  ATOM    775  CA   ASN B 164       95.594  20.449 -10.842  1.00 20.00   6
     ATOM    776  CB   ASN B 164       96.339  19.944  -9.610  1.00 20.00   6
     ATOM    777  CG   ASN B 164       97.766  19.529  -9.943  1.00 20.00   6
     ATOM    778  OD1  ASN B 164       97.992  18.776 -10.892  1.00 20.00   8
     ATOM    779  ND2  ASN B 164       98.730  20.014  -9.171  1.00 20.00   7
 45  ATOM    780  C    ASN B 164       94.084  20.246 -10.706  1.00 20.00   6
     ATOM    781  O    ASN B 164       93.630  19.183 -10.286  1.00 20.00   8
     ATOM    782  N    GLY B 165       93.309  21.257 -11.080  1.00 20.00   7
     ATOM    783  CA   GLY B 165       91.863  21.127 -11.039  1.00 20.00   6
     ATOM    784  C    GLY B 165       91.159  21.088  -9.694  1.00 20.00   6
 50  ATOM    785  O    GLY B 165       91.663  21.598  -8.698  1.00 20.00   8
     ATOM    786  N    GLU B 166       89.986  20.461  -9.689  1.00 20.00   7
     ATOM    787  CA   GLU B 166       89.126  20.344  -8.513  1.00 20.00   6
     ATOM    788  CB   GLU B 166       87.683  20.079  -8.962  1.00 20.00   6
     ATOM    789  CG   GLU B 166       86.992  21.255  -9.646  1.00 20.00   6
 55  ATOM    790  CD   GLU B 166       85.709  20.837 -10.358  1.00 20.00   6
     ATOM    791  OE1  GLU B 166       85.137  19.794  -9.986  1.00 20.00   8
     ATOM    792  OE2  GLU B 166       85.263  21.556 -11.279  1.00 20.00   8
     ATOM    793  C    GLU B 166       89.520  19.270  -7.506  1.00 20.00   6
     ATOM    794  O    GLU B 166       89.952  18.184  -7.874  1.00 20.00   8
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      ATOM    795  N    LEU B 167      89.344  19.579  -6.226  1.00 20.00   7
      ATOM    796  CA   LEU B 167      89.651  18.626  -5.168  1.00 20.00   6
      ATOM    797  CB   LEU B 167      89.395  19.269  -3.802  1.00 20.00   6
      ATOM    798  CG   LEU B 167      89.408  18.363  -2.569  1.00 20.00   6
   5  ATOM    799  CD1  LEU B 167      90.769  17.703  -2.412  1.00 20.00   6
      ATOM    800  CD2  LEU B 167      89.065  19.193  -1.338  1.00 20.00   6
      ATOM    801  C    LEU B 167      88.757  17.394  -5.346  1.00 20.00   6
      ATOM    802  O    LEU B 167      89.124  16.283  -4.968  1.00 20.00   8
      ATOM    803  N    LEU B 168      87.580  17.600  -5.927  1.00 20.00   7
  10  ATOM    804  CA   LEU B 168      86.647  16.500  -6.153  1.00 20.00   6
      ATOM    805  CB   LEU B 168      85.364  17.014  -6.809  1.00 20.00   6
      ATOM    806  CG   LEU B 168      84.292  15.977  -7.168  1.00 20.00   6
      ATOM    807  CD1  LEU B 168      83.883  15.186  -5.929  1.00 20.00   6
      ATOM    808  CD2  LEU B 168      83.083  16.687  -7.756  1.00 20.00   6
  15  ATOM    809  C    LEU B 168      87.290  15.440  -7.046  1.00 20.00   6
      ATOM    810  O    LEU B 168      87.091  14.243  -6.845  1.00 20.00   8
      ATOM    811  N    LYS B 169      88.068  15.888  -8.027  1.00 20.00   7
      ATOM    812  CA   LYS B 169      88.727  14.967  -8.941  1.00 20.00   6
      ATOM    813  CB   LYS B 169      89.610  15.729  -9.930  1.00 20.00   6
  20  ATOM    814  CG   LYS B 169      90.379  14.818 -10.882  1.00 20.00   6
      ATOM    815  CD   LYS B 169      91.226  15.603 -11.877  1.00 20.00   6
      ATOM    816  CE   LYS B 169      92.373  16.328 -11.192  1.00 20.00   6
      ATOM    817  NZ   LYS B 169      93.253  17.021 -12.173  1.00 20.00   7
      ATOM    818  C    LYS B 169      89.574  13.949  -8.193  1.00 20.00   6
  25  ATOM    819  O    LYS B 169      89.543  12.758  -8.504  1.00 20.00   8
      ATOM    820  N    TYR B 170      90.334  14.417  -7.207  1.00 20.00   7
      ATOM    821  CA   TYR B 170      91.197  13.527  -6.441  1.00 20.00   6
      ATOM    822  CB   TYR B 170      92.243  14.346  -5.682  1.00 20.00   6
      ATOM    823  CG   TYR B 170      93.217  15.010  -6.624  1.00 20.00   6
  30  ATOM    824  CD1  TYR B 170      94.347  14.331  -7.085  1.00 20.00   6
      ATOM    825  CE1  TYR B 170      95.195  14.900  -8.036  1.00 20.00   6
      ATOM    826  CD2  TYR B 170      92.956  16.282  -7.133  1.00 20.00   6
      ATOM    827  CE2  TYR B 170      93.801  16.861  -8.083  1.00 20.00   6
      ATOM    828  CZ   TYR B 170      94.913  16.164  -8.532  1.00 20.00   6
  35  ATOM    829  OH   TYR B 170      95.727  16.727  -9.493  1.00 20.00   8
      ATOM    830  C    TYR B 170      90.419  12.622  -5.499  1.00 20.00   6
      ATOM    831  O    TYR B 170      90.834  11.494  -5.233  1.00 20.00   8
      ATOM    832  N    ILE B 171      89.287  13.098  -4.993  1.00 20.00   7
      ATOM    833  CA   ILE B 171      88.488  12.262  -4.112  1.00 20.00   6
  40  ATOM    834  CB   ILE B 171      87.278  13.028  -3.538  1.00 20.00   6
      ATOM    835  CG2  ILE B 171      86.367  12.065  -2.791  1.00 20.00   6
      ATOM    836  CG1  ILE B 171      87.764  14.141  -2.603  1.00 20.00   6
      ATOM    837  CD1  ILE B 171      86.652  14.990  -2.019  1.00 20.00   6
      ATOM    838  C    ILE B 171      87.994  11.066  -4.931  1.00 20.00   6
  45  ATOM    839  O    ILE B 171      88.030   9.925  -4.468  1.00 20.00   8
      ATOM    840  N    ARG B 172      87.550  11.331  -6.156  1.00 20.00   7
      ATOM    841  CA   ARG B 172      87.061  10.273  -7.031  1.00 20.00   6
      ATOM    842  CB   ARG B 172      86.359  10.861  -8.259  1.00 20.00   6
      ATOM    843  CG   ARG B 172      85.094  11.658  -7.963  1.00 20.00   6
  50  ATOM    844  CD   ARG B 172      84.352  11.981  -9.259  1.00 20.00   6
      ATOM    845  NE   ARG B 172      83.187  12.843  -9.063  1.00 20.00   7
      ATOM    846  CZ   ARG B 172      82.192  12.589  -8.217  1.00 20.00   6
      ATOM    847  NH1  ARG B 172      82.209  11.491  -7.469  1.00 20.00   7
      ATOM    848  NH2  ARG B 172      81.168  13.428  -8.127  1.00 20.00   7
  55  ATOM    849  C    ARG B 172      88.202   9.378  -7.497  1.00 20.00   6
      ATOM    850  O    ARG B 172      88.050   8.160  -7.587  1.00 20.00   8
      ATOM    851  N    LYS B 173      89.348   9.985  -7.783  1.00 20.00   7
      ATOM    852  CA   LYS B 173      90.509   9.244  -8.256  1.00 20.00   6
      ATOM    853  CB   LYS B 173      91.647  10.206  -8.603  1.00 20.00   6
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      ATOM    854  CG  LYS B 173      92.930    9.511  -9.045  1.00 20.00   6
      ATOM    855  CD  LYS B 173      94.081   10.496  -9.222  1.00 20.00   6
      ATOM    856  CE  LYS B 173      93.862   11.432 -10.406  1.00 20.00   6
      ATOM    857  NZ  LYS B 173      93.858   10.711 -11.715  1.00 20.00   7
  5   ATOM    858  C   LYS B 173      91.025    8.191  -7.280  1.00 20.00   6
      ATOM    859  O   LYS B 173      91.274    7.055  -7.674  1.00 20.00   8
      ATOM    860  N   ILE B 174      91.192    8.554  -6.012  1.00 20.00   7
      ATOM    861  CA  ILE B 174      91.710    7.593  -5.042  1.00 20.00   6
      ATOM    862  CB  ILE B 174      92.884    8.191  -4.223  1.00 20.00   6
 10   ATOM    863  CG2 ILE B 174      93.970    8.701  -5.166  1.00 20.00   6
      ATOM    864  CG1 ILE B 174      92.394    9.337  -3.343  1.00 20.00   6
      ATOM    865  CD1 ILE B 174      93.480    9.916  -2.457  1.00 20.00   6
      ATOM    866  C   ILE B 174      90.674    7.030  -4.074  1.00 20.00   6
      ATOM    867  O   ILE B 174      91.025    6.296  -3.151  1.00 20.00   8
 15   ATOM    868  N   GLY B 175      89.405    7.367  -4.283  1.00 20.00   7
      ATOM    869  CA  GLY B 175      88.359    6.855  -3.413  1.00 20.00   6
      ATOM    870  C   GLY B 175      88.160    7.650  -2.138  1.00 20.00   6
      ATOM    871  O   GLY B 175      87.083    8.198  -1.905  1.00 20.00   8
      ATOM    872  N   SER B 176      89.192    7.701  -1.304  1.00 20.00   7
 20   ATOM    873  CA  SER B 176      89.140    8.447  -0.053  1.00 20.00   6
      ATOM    874  CB  SER B 176      88.395    7.653   1.026  1.00 20.00   6
      ATOM    875  OG  SER B 176      89.150    6.543   1.472  1.00 20.00   8
      ATOM    876  C   SER B 176      90.565    8.742   0.401  1.00 20.00   6
      ATOM    877  O   SER B 176      91.506    8.049   0.009  1.00 20.00   8
 25   ATOM    878  N   PHE B 177      90.718    9.769   1.228  1.00 20.00   7
      ATOM    879  CA  PHE B 177      92.029   10.184   1.722  1.00 20.00   6
      ATOM    880  CB  PHE B 177      92.028   11.694   1.990  1.00 20.00   6
      ATOM    881  CG  PHE B 177      92.002   12.546   0.747  1.00 20.00   6
      ATOM    882  CD1 PHE B 177      91.484   12.060  -0.449  1.00 20.00   6
 30   ATOM    883  CD2 PHE B 177      92.481   13.855   0.787  1.00 20.00   6
      ATOM    884  CE1 PHE B 177      91.443   12.860  -1.585  1.00 20.00   6
      ATOM    885  CE2 PHE B 177      92.444   14.665  -0.343  1.00 20.00   6
      ATOM    886  CZ  PHE B 177      91.925   14.168  -1.532  1.00 20.00   6
      ATOM    887  C   PHE B 177      92.427    9.475   3.009  1.00 20.00   6
 35   ATOM    888  O   PHE B 177      91.582    9.223   3.872  1.00 20.00   8
      ATOM    889  N   ASP B 178      93.711    9.152   3.147  1.00 20.00   7
      ATOM    890  CA  ASP B 178      94.155    8.529   4.385  1.00 20.00   6
      ATOM    891  CB  ASP B 178      95.581    7.972   4.267  1.00 20.00   6
      ATOM    892  CG  ASP B 178      96.594    9.018   3.845  1.00 20.00   6
 40   ATOM    893  OD1 ASP B 178      96.392   10.214   4.139  1.00 20.00   8
      ATOM    894  OD2 ASP B 178      97.612    8.634   3.230  1.00 20.00   8
      ATOM    895  C   ASP B 178      94.092    9.640   5.436  1.00 20.00   6
      ATOM    896  O   ASP B 178      93.736   10.778   5.117  1.00 20.00   8
      ATOM    897  N   GLU B 179      94.443    9.324   6.677  1.00 20.00   7
 45   ATOM    898  CA  GLU B 179      94.380   10.311   7.744  1.00 20.00   6
      ATOM    899  CB  GLU B 179      94.623    9.637   9.096  1.00 20.00   6
      ATOM    900  CG  GLU B 179      94.747   10.611  10.255  1.00 20.00   6
      ATOM    901  CD  GLU B 179      94.331    9.994  11.574  1.00 20.00   6
      ATOM    902  OE1 GLU B 179      94.589    8.789  11.770  1.00 20.00   8
 50   ATOM    903  OE2 GLU B 179      93.753   10.717  12.416  1.00 20.00   8
      ATOM    904  C   GLU B 179      95.320   11.501   7.575  1.00 20.00   6
      ATOM    905  O   GLU B 179      94.948   12.636   7.881  1.00 20.00   8
      ATOM    906  N   THR B 180      96.528   11.246   7.086  1.00 20.00   7
      ATOM    907  CA  THR B 180      97.509   12.308   6.886  1.00 20.00   6
 55   ATOM    908  CB  THR B 180      98.086   11.720   6.445  1.00 20.00   6
      ATOM    909  OG1 THR B 180      99.349   10.842   7.466  1.00 20.00   8
      ATOM    910  CG2 THR B 180      99.888   12.825   6.213  1.00 20.00   6
      ATOM    911  C   THR B 180      97.040   13.331   5.849  1.00 20.00   6
      ATOM    912  O   THR B 180      97.136   14.542   6.069  1.00 20.00   8
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     ATOM    913  N    CYS B 181      96.534  12.845   4.721  1.00 20.00   7
     ATOM    914  CA   CYS B 181      96.057  13.733   3.666  1.00 20.00   6
     ATOM    915  CB   CYS B 181      95.836  12.945   2.375  1.00 20.00   6
     ATOM    916  SG   CYS B 181      97.372  12.255   1.685  1.00 20.00  16
  5  ATOM    917  C    CYS B 181      94.775  14.449   4.079  1.00 20.00   6
     ATOM    918  O    CYS B 181      94.570  15.615   3.733  1.00 20.00   8
     ATOM    919  N    THR B 182      93.914  13.755   4.820  1.00 20.00   7
     ATOM    920  CA   THR B 182      92.669  14.356   5.286  1.00 20.00   6
     ATOM    921  CB   THR B 182      91.812  13.354   6.103  1.00 20.00   6
 10  ATOM    922  OG1  THR B 182      91.372  12.283   5.259  1.00 20.00   8
     ATOM    923  CG2  THR B 182      90.600  14.054   6.690  1.00 20.00   6
     ATOM    924  C    THR B 182      93.014  15.535   6.196  1.00 20.00   6
     ATOM    925  O    THR B 182      92.515  16.649   6.019  1.00 20.00   8
     ATOM    926  N    ARG B 183      93.873  15.273   7.175  1.00 20.00   7
 15  ATOM    927  CA   ARG B 183      94.299  16.293   8.121  1.00 20.00   6
     ATOM    928  CB   ARG B 183      95.311  15.707   9.109  1.00 20.00   6
     ATOM    929  CG   ARG B 183      95.957  16.744  10.012  1.00 20.00   6
     ATOM    930  CD   ARG B 183      96.886  16.116  11.050  1.00 20.00   6
     ATOM    931  NE   ARG B 183      96.167  15.220  11.949  1.00 20.00   7
 20  ATOM    932  CZ   ARG B 183      96.098  13.900  11.804  1.00 20.00   6
     ATOM    933  NH1  ARG B 183      96.717  13.306  10.791  1.00 20.00   7
     ATOM    934  NH2  ARG B 183      95.389  13.176  12.664  1.00 20.00   7
     ATOM    935  C    ARG B 183      94.923  17.505   7.427  1.00 20.00   6
     ATOM    936  O    ARG B 183      94.545  18.646   7.698  1.00 20.00   8
 25  ATOM    937  N    PHE B 184      95.877  17.264   6.534  1.00 20.00   7
     ATOM    938  CA   PHE B 184      96.539  18.367   5.847  1.00 20.00   6
     ATOM    939  CB   PHE B 184      97.610  17.847   4.889  1.00 20.00   6
     ATOM    940  CG   PHE B 184      98.387  18.943   4.223  1.00 20.00   6
     ATOM    941  CD1  PHE B 184      99.451  19.555   4.879  1.00 20.00   6
 30  ATOM    942  CD2  PHE B 184      98.009  19.415   2.975  1.00 20.00   6
     ATOM    943  CE1  PHE B 184     100.125  20.627   4.301  1.00 20.00   6
     ATOM    944  CE2  PHE B 184      98.676  20.491   2.388  1.00 20.00   6
     ATOM    945  CZ   PHE B 184      99.735  21.097   3.053  1.00 20.00   6
     ATOM    946  C    PHE B 184      95.580  19.267   5.066  1.00 20.00   6
 35  ATOM    947  O    PHE B 184      95.567  20.481   5.255  1.00 20.00   8
     ATOM    948  N    TYR B 185      94.784  18.679   4.181  1.00 20.00   7
     ATOM    949  CA   TYR B 185      93.854  19.471   3.390  1.00 20.00   6
     ATOM    950  CB   TYR B 185      93.305  18.634   2.236  1.00 20.00   6
     ATOM    951  CG   TYR B 185      94.337  18.504   1.140  1.00 20.00   6
 40  ATOM    952  CD1  TYR B 185      94.611  19.580   0.293  1.00 20.00   6
     ATOM    953  CE1  TYR B 185      95.637  19.516  -0.643  1.00 20.00   6
     ATOM    954  CD2  TYR B 185      95.118  17.352   1.017  1.00 20.00   6
     ATOM    955  CE2  TYR B 185      96.152  17.282   0.081  1.00 20.00   6
     ATOM    956  CZ   TYR B 185      96.405  18.367  -0.742  1.00 20.00   6
 45  ATOM    957  OH   TYR B 185      97.436  18.314  -1.657  1.00 20.00   8
     ATOM    958  C    TYR B 185      92.738  20.098   4.208  1.00 20.00   6
     ATOM    959  O    TYR B 185      92.286  21.195   3.891  1.00 20.00   8
     ATOM    960  N    THR B 186      92.303  19.422   5.267  1.00 20.00   7
     ATOM    961  CA   THR B 186      91.265  19.987   6.122  1.00 20.00   6
 50  ATOM    962  CB   THR B 186      90.799  18.996   7.219  1.00 20.00   6
     ATOM    963  OG1  THR B 186      90.193  17.846   6.606  1.00 20.00   8
     ATOM    964  CG2  THR B 186      89.774  19.671   8.144  1.00 20.00   6
     ATOM    965  C    THR B 186      91.858  21.218   6.805  1.00 20.00   6
     ATOM    966  O    THR B 186      91.188  22.242   6.948  1.00 20.00   8
 55  ATOM    967  N    ALA B 187      93.120  21.115   7.222  1.00 20.00   7
     ATOM    968  CA   ALA B 187      93.787  22.234   7.882  1.00 20.00   6
     ATOM    969  CB   ALA B 187      95.184  21.817   8.349  1.00 20.00   6
     ATOM    970  C    ALA B 187      93.879  23.449   6.946  1.00 20.00   6
     ATOM    971  O    ALA B 187      93.654  24.585   7.372  1.00 20.00   8
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       ATOM    972  N    GLU B 188      94.205  23.222   5.674  1.00 20.00   7
       ATOM    973  CA   GLU B 188      94.292  24.343   4.740  1.00 20.00   6
       ATOM    974  CB   GLU B 188      94.843  23.898   3.376  1.00 20.00   6
       ATOM    975  CG   GLU B 188      96.285  23.391   3.407  1.00 20.00   6
   5   ATOM    976  CD   GLU B 188      97.030  23.639   2.104  1.00 20.00   6
       ATOM    977  OE1  GLU B 188      96.407  23.537   1.024  1.00 20.00   8
       ATOM    978  OE2  GLU B 188      98.247  23.932   2.156  1.00 20.00   8
       ATOM    979  C    GLU B 188      92.912  24.977   4.561  1.00 20.00   6
       ATOM    980  O    GLU B 188      92.782  26.196   4.533  1.00 20.00   8
  10   ATOM    981  N    ILE B 189      91.875  24.152   4.451  1.00 20.00   7
       ATOM    982  CA   ILE B 189      90.530  24.693   4.284  1.00 20.00   6
       ATOM    983  CB   ILE B 189      89.495  23.566   4.064  1.00 20.00   6
       ATOM    984  CG2  ILE B 189      88.094  24.157   3.947  1.00 20.00   6
       ATOM    985  CG1  ILE B 189      89.855  22.773   2.796  1.00 20.00   6
  15   ATOM    986  CD1  ILE B 189      89.058  21.488   2.616  1.00 20.00   6
       ATOM    987  C    ILE B 189      90.152  25.517   5.519  1.00 20.00   6
       ATOM    988  O    ILE B 189      89.634  26.630   5.396  1.00 20.00   8
       ATOM    989  N    VAL B 190      90.412  24.971   6.707  1.00 20.00   7
       ATOM    990  CA   VAL B 190      90.116  25.674   7.957  1.00 20.00   6
  20   ATOM    991  CB   VAL B 190      90.557  24.842   9.186  1.00 20.00   6
       ATOM    992  CG1  VAL B 190      90.540  25.717  10.451  1.00 20.00   6
       ATOM    993  CG2  VAL B 190      89.643  23.641   9.358  1.00 20.00   6
       ATOM    994  C    VAL B 190      90.865  27.012   7.984  1.00 20.00   6
       ATOM    995  O    VAL B 190      90.311  28.039   8.375  1.00 20.00   8
  25   ATOM    996  N    SER B 191      92.125  26.997   7.557  1.00 20.00   7
       ATOM    997  CA   SER B 191      92.934  28.218   7.546  1.00 20.00   6
       ATOM    998  CB   SER B 191      94.378  27.888   7.166  1.00 20.00   6
       ATOM    999  OG   SER B 191      95.220  29.007   7.363  1.00 20.00   8
       ATOM   1000  C    SER B 191      92.361  29.240   6.566  1.00 20.00   6
  30   ATOM   1001  O    SER B 191      92.351  30.444   6.838  1.00 20.00   8
       ATOM   1002  N    ALA B 192      91.882  28.754   5.425  1.00 20.00   7
       ATOM   1003  CA   ALA B 192      91.306  29.634   4.417  1.00 20.00   6
       ATOM   1004  CB   ALA B 192      91.006  28.850   3.141  1.00 20.00   6
       ATOM   1005  C    ALA B 192      90.029  30.256   4.970  1.00 20.00   6
  35   ATOM   1006  O    ALA B 192      89.799  31.458   4.822  1.00 20.00   8
       ATOM   1007  N    LEU B 193      89.203  29.439   5.621  1.00 20.00   7
       ATOM   1008  CA   LEU B 193      87.957  29.941   6.192  1.00 20.00   6
       ATOM   1009  CB   LEU B 193      87.101  28.783   6.725  1.00 20.00   6
       ATOM   1010  CG   LEU B 193      86.447  27.898   5.650  1.00 20.00   6
  40   ATOM   1011  CD1  LEU B 193      85.645  26.771   6.315  1.00 20.00   6
       ATOM   1012  CD2  LEU B 193      85.530  28.752   4.780  1.00 20.00   6
       ATOM   1013  C    LEU B 193      88.215  30.959   7.299  1.00 20.00   6
       ATOM   1014  O    LEU B 193      87.474  31.935   7.435  1.00 20.00   8
       ATOM   1015  N    GLU B 194      89.254  30.738   8.100  1.00 20.00   7
  45   ATOM   1016  CA   GLU B 194      89.562  31.699   9.157  1.00 20.00   6
       ATOM   1017  CB   GLU B 194      90.773  31.257   9.982  1.00 20.00   6
       ATOM   1018  CG   GLU B 194      91.288  32.353  10.914  1.00 20.00   6
       ATOM   1019  CD   GLU B 194      92.381  31.878  11.855  1.00 20.00   6
       ATOM   1020  OE1  GLU B 194      93.246  31.090  11.420  1.00 20.00   8
  50   ATOM   1021  OE2  GLU B 194      92.376  32.312  13.031  1.00 20.00   8
       ATOM   1022  C    GLU B 194      89.847  33.053   8.511  1.00 20.00   6
       ATOM   1023  O    GLU B 194      89.375  34.083   8.972  1.00 20.00   8
       ATOM   1024  N    TYR B 195      90.608  33.046   7.426  1.00 20.00   7
       ATOM   1025  CA   TYR B 195      90.928  34.294   6.743  1.00 20.00   6
  55   ATOM   1026  CB   TYR B 195      91.919  34.043   5.613  1.00 20.00   6
       ATOM   1027  CG   TYR B 195      92.193  35.271   4.774  1.00 20.00   6
       ATOM   1028  CD1  TYR B 195      93.098  36.244   5.202  1.00 20.00   6
       ATOM   1029  CE1  TYR B 195      93.356  37.382   4.429  1.00 20.00   6
       ATOM   1030  CD2  TYR B 195      91.545  35.461   3.553  1.00 20.00   6
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      ATOM   1031  CE2 TYR B 195      91.794  36.591   2.775  1.00 20.00   6
      ATOM   1032  CZ  TYR B 195      92.701  37.545   3.219  1.00 20.00   6
      ATOM   1033  OH  TYR B 195      92.956  38.656   2.450  1.00 20.00   8
      ATOM   1034  C   TYR B 195      89.668  34.923   6.160  1.00 20.00   6
  5   ATOM   1035  O   TYR B 195      89.409  36.117   6.328  1.00 20.00   8
      ATOM   1036  N   LEU B 196      88.885  34.103   5.472  1.00 20.00   7
      ATOM   1037  CA  LEU B 196      87.664  34.576   4.845  1.00 20.00   6
      ATOM   1038  CB  LEU B 196      86.972  33.426   4.107  1.00 20.00   6
      ATOM   1039  CG  LEU B 196      85.933  33.824   3.060  1.00 20.00   6
 10   ATOM   1040  CD1 LEU B 196      86.602  34.659   1.966  1.00 20.00   6
      ATOM   1041  CD2 LEU B 196      85.305  32.568   2.463  1.00 20.00   6
      ATOM   1042  C   LEU B 196      86.731  35.161   5.888  1.00 20.00   6
      ATOM   1043  O   LEU B 196      86.299  36.308   5.774  1.00 20.00   8
      ATOM   1044  N   HIS B 197      86.431  34.378   6.917  1.00 20.00   7
 15   ATOM   1045  CA  HIS B 197      85.533  34.840   7.967  1.00 20.00   6
      ATOM   1046  CB  HIS B 197      85.241  33.697   8.942  1.00 20.00   6
      ATOM   1047  CG  HIS B 197      84.377  32.622   8.356  1.00 20.00   6
      ATOM   1048  CD2 HIS B 197      83.734  32.550   7.163  1.00 20.00   6
      ATOM   1049  ND1 HIS B 197      84.083  31.452   9.022  1.00 20.00   7
 20   ATOM   1050  CE1 HIS B 197      83.296  30.704   8.264  1.00 20.00   6
      ATOM   1051  NE2 HIS B 197      83.071  31.346   7.132  1.00 20.00   7
      ATOM   1052  C   HIS B 197      86.080  36.060   8.697  1.00 20.00   6
      ATOM   1053  O   HIS B 197      85.314  36.919   9.146  1.00 20.00   8
      ATOM   1054  N   GLY B 198      87.404  36.143   8.804  1.00 20.00   7
 25   ATOM   1055  CA  GLY B 198      88.009  37.285   9.464  1.00 20.00   6
      ATOM   1056  C   GLY B 198      87.687  38.580   8.737  1.00 20.00   6
      ATOM   1057  O   GLY B 198      87.784  39.661   9.311  1.00 20.00   8
      ATOM   1058  N   LYS B 199      87.308  38.475   7.466  1.00 20.00   7
      ATOM   1059  CA  LYS B 199      86.959  39.652   6.674  1.00 20.00   6
 30   ATOM   1060  CB  LYS B 199      87.577  39.573   5.279  1.00 20.00   6
      ATOM   1061  CG  LYS B 199      89.082  39.736   5.258  1.00 20.00   6
      ATOM   1062  CD  LYS B 199      89.574  39.919   3.833  1.00 20.00   6
      ATOM   1063  CE  LYS B 199      91.054  40.243   3.807  1.00 20.00   6
      ATOM   1064  NZ  LYS B 199      91.398  41.382   4.706  1.00 20.00   7
 35   ATOM   1065  C   LYS B 199      85.451  39.804   6.539  1.00 20.00   6
      ATOM   1066  O   LYS B 199      84.972  40.556   5.693  1.00 20.00   8
      ATOM   1067  N   GLY B 200      84.707  39.079   7.368  1.00 20.00   7
      ATOM   1068  CA  GLY B 200      83.258  39.158   7.328  1.00 20.00   6
      ATOM   1069  C   GLY B 200      82.646  38.660   6.032  1.00 20.00   6
 40   ATOM   1070  O   GLY B 200      81.644  39.198   5.564  1.00 20.00   8
      ATOM   1071  N   ILE B 201      83.243  37.630   5.445  1.00 20.00   7
      ATOM   1072  CA  ILE B 201      82.726  37.075   4.205  1.00 20.00   6
      ATOM   1073  CB  ILE B 201      83.775  37.140   3.080  1.00 20.00   6
      ATOM   1074  CG2 ILE B 201      83.257  36.413   1.841  1.00 20.00   6
 45   ATOM   1075  CG1 ILE B 201      84.109  38.599   2.761  1.00 20.00   6
      ATOM   1076  CD1 ILE B 201      85.330  38.758   1.870  1.00 20.00   6
      ATOM   1077  C   ILE B 201      82.329  35.623   4.395  1.00 20.00   6
      ATOM   1078  O   ILE B 201      83.094  34.826   4.942  1.00 20.00   8
      ATOM   1079  N   ILE B 202      81.125  35.291   3.940  1.00 20.00   7
 50   ATOM   1080  CA  ILE B 202      80.592  33.936   4.016  1.00 20.00   6
      ATOM   1081  CB  ILE B 202      79.119  33.953   4.481  1.00 20.00   6
      ATOM   1082  CG2 ILE B 202      78.583  32.522   4.595  1.00 20.00   6
      ATOM   1083  CG1 ILE B 202      79.008  34.675   5.825  1.00 20.00   6
      ATOM   1084  CD1 ILE B 202      77.576  34.865   6.294  1.00 20.00   6
 55   ATOM   1085  C   ILE B 202      80.644  33.393   2.589  1.00 20.00   6
      ATOM   1086  O   ILE B 202      80.182  34.056   1.663  1.00 20.00   8
      ATOM   1087  N   HIS B 203      81.204  32.204   2.395  1.00 20.00   7
      ATOM   1088  CA  HIS B 203      81.279  31.652   1.044  1.00 20.00   6
      ATOM   1089  CB  HIS B 203      82.258  30.480   0.999  1.00 20.00   6
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     ATOM   1090  CG  HIS B 203      82.478  29.942  -0.380  1.00 20.00   6
     ATOM   1091  CD2 HIS B 203      81.646  29.282  -1.220  1.00 20.00   6
     ATOM   1092  ND1 HIS B 203      83.659  30.116  -1.069  1.00 20.00   7
     ATOM   1093  CE1 HIS B 203      83.545  29.588  -2.275  1.00 20.00   6
 5   ATOM   1094  NE2 HIS B 203      82.333  29.076  -2.392  1.00 20.00   7
     ATOM   1095  C   HIS B 203      79.896  31.211   0.530  1.00 20.00   6
     ATOM   1096  O   HIS B 203      79.508  31.546  -0.593  1.00 20.00   8
     ATOM   1097  N   ARG B 204      79.168  30.458   1.357  1.00 20.00   7
     ATOM   1098  CA  ARG B 204      77.819  29.969   1.039  1.00 20.00   6
10   ATOM   1099  CB  ARG B 204      76.916  31.117   0.583  1.00 20.00   6
     ATOM   1100  CG  ARG B 204      76.601  32.120   1.675  1.00 20.00   6
     ATOM   1101  CD  ARG B 204      75.316  32.878   1.377  1.00 20.00   6
     ATOM   1102  NE  ARG B 204      75.376  33.616   0.119  1.00 20.00   7
     ATOM   1103  CZ  ARG B 204      74.423  34.443  -0.303  1.00 20.00   6
15   ATOM   1104  NH1 ARG B 204      73.336  34.636   0.436  1.00 20.00   7
     ATOM   1105  NH2 ARG B 204      74.555  35.084  -1.457  1.00 20.00   7
     ATOM   1106  C   ARG B 204      77.700  28.829   0.030  1.00 20.00   6
     ATOM   1107  O   ARG B 204      76.611  28.300  -0.177  1.00 20.00   8
     ATOM   1108  N   ASP B 205      78.792  28.456  -0.620  1.00 20.00   7
20   ATOM   1109  CA  ASP B 205      78.718  27.342  -1.550  1.00 20.00   6
     ATOM   1110  CB  ASP B 205      78.380  27.829  -2.961  1.00 20.00   6
     ATOM   1111  CG  ASP B 205      77.941  26.694  -3.867  1.00 20.00   6
     ATOM   1112  OD1 ASP B 205      77.544  25.638  -3.330  1.00 20.00   8
     ATOM   1113  OD2 ASP B 205      77.982  26.853  -5.104  1.00 20.00   8
25   ATOM   1114  C   ASP B 205      80.019  26.560  -1.547  1.00 20.00   6
     ATOM   1115  O   ASP B 205      80.508  26.122  -2.588  1.00 20.00   8
     ATOM   1116  N   LEU B 206      80.573  26.375  -0.354  1.00 20.00   7
     ATOM   1117  CA  LEU B 206      81.819  25.652  -0.208  1.00 20.00   6
     ATOM   1118  CB  LEU B 206      82.361  25.826   1.212  1.00 20.00   6
30   ATOM   1119  CG  LEU B 206      83.764  25.271   1.471  1.00 20.00   6
     ATOM   1120  CD1 LEU B 206      84.765  25.969   0.561  1.00 20.00   6
     ATOM   1121  CD2 LEU B 206      84.135  25.477   2.933  1.00 20.00   6
     ATOM   1122  C   LEU B 206      81.609  24.174  -0.514  1.00 20.00   6
     ATOM   1123  O   LEU B 206      80.691  23.549   0.011  1.00 20.00   8
35   ATOM   1124  N   LYS B 207      82.461  23.628  -1.375  1.00 20.00   7
     ATOM   1125  CA  LYS B 207      82.379  22.223  -1.765  1.00 20.00   6
     ATOM   1126  CB  LYS B 207      81.160  22.000  -2.679  1.00 20.00   6
     ATOM   1127  CG  LYS B 207      81.130  22.913  -3.893  1.00 20.00   6
     ATOM   1128  CD  LYS B 207      79.876  22.720  -4.736  1.00 20.00   6
40   ATOM   1129  CE  LYS B 207      79.788  23.797  -5.813  1.00 20.00   6
     ATOM   1130  NZ  LYS B 207      78.695  23.557  -6.791  1.00 20.00   7
     ATOM   1131  C   LYS B 207      83.657  21.808  -2.487  1.00 20.00   6
     ATOM   1132  O   LYS B 207      84.416  22.656  -2.960  1.00 20.00   8
     ATOM   1133  N   PRO B 208      83.916  20.494  -2.582  1.00 20.00   7
45   ATOM   1134  CD  PRO B 208      83.153  19.378  -1.993  1.00 20.00   6
     ATOM   1135  CA  PRO B 208      85.122  20.005  -3.259  1.00 20.00   6
     ATOM   1136  CB  PRO B 208      84.922  18.494  -3.267  1.00 20.00   6
     ATOM   1137  CG  PRO B 208      84.174  18.256  -1.984  1.00 20.00   6
     ATOM   1138  C   PRO B 208      85.303  20.574  -4.666  1.00 20.00   6
50   ATOM   1139  O   PRO B 208      86.431  20.752  -5.124  1.00 20.00   8
     ATOM   1140  N   GLU B 209      84.197  20.859  -5.347  1.00 20.00   7
     ATOM   1141  CA  GLU B 209      84.243  21.410  -6.705  1.00 20.00   6
     ATOM   1142  CB  GLU B 209      82.836  21.424  -7.317  1.00 20.00   6
     ATOM   1143  CG  GLU B 209      82.755  22.081  -8.690  1.00 20.00   6
55   ATOM   1144  CD  GLU B 209      81.323  22.296  -9.159  1.00 20.00   6
     ATOM   1145  OE1 GLU B 209      80.587  21.299  -9.322  1.00 20.00   8
     ATOM   1146  OE2 GLU B 209      80.933  23.465  -9.364  1.00 20.00   8
     ATOM   1147  C   GLU B 209      84.810  22.836  -6.716  1.00 20.00   6
     ATOM   1148  O   GLU B 209      85.409  23.269  -7.705  1.00 20.00   8
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      ATOM    1149  N    ASN B 210       84.604  23.549   -5.612  1.00 20.00   7
      ATOM    1150  CA   ASN B 210       85.051  24.932   -5.439  1.00 20.00   6
      ATOM    1151  CB   ASN B 210       84.033  25.695   -4.588  1.00 20.00   6
      ATOM    1152  CG   ASN B 210       82.851  26.170   -5.396  1.00 20.00   6
 5    ATOM    1153  OD1  ASN B 210       81.807  26.520   -4.846  1.00 20.00   8
      ATOM    1154  ND2  ASN B 210       83.010  26.194   -6.717  1.00 20.00   7
      ATOM    1155  C    ASN B 210       86.427  25.070   -4.797  1.00 20.00   6
      ATOM    1156  O    ASN B 210       86.937  26.181   -4.641  1.00 20.00   8
      ATOM    1157  N    ILE B 211       87.016  23.948   -4.406  1.00 20.00   7
10    ATOM    1158  CA   ILE B 211       88.331  23.958   -3.790  1.00 20.00   6
      ATOM    1159  CB   ILE B 211       88.336  23.090   -2.521  1.00 20.00   6
      ATOM    1160  CG2  ILE B 211       89.732  23.025   -1.925  1.00 20.00   6
      ATOM    1161  CG1  ILE B 211       87.350  23.682   -1.510  1.00 20.00   6
      ATOM    1162  CD1  ILE B 211       87.121  22.832   -0.285  1.00 20.00   6
15    ATOM    1163  C    ILE B 211       89.307  23.414   -4.816  1.00 20.00   6
      ATOM    1164  O    ILE B 211       89.475  22.199   -4.949  1.00 20.00   8
      ATOM    1165  N    LEU B 212       89.938  24.319   -5.558  1.00 20.00   7
      ATOM    1166  CA   LEU B 212       90.875  23.918   -6.601  1.00 20.00   6
      ATOM    1167  CB   LEU B 212       90.966  25.012   -7.673  1.00 20.00   6
20    ATOM    1168  CG   LEU B 212       89.630  25.510   -8.235  1.00 20.00   6
      ATOM    1169  CD1  LEU B 212       89.896  26.462   -9.390  1.00 20.00   6
      ATOM    1170  CD2  LEU B 212       88.781  24.331   -8.709  1.00 20.00   6
      ATOM    1171  C    LEU B 212       92.254  23.628   -6.038  1.00 20.00   6
      ATOM    1172  O    LEU B 212       92.537  23.923   -4.873  1.00 20.00   8
25    ATOM    1173  N    LEU B 213       93.114  23.053   -6.875  1.00 20.00   7
      ATOM    1174  CA   LEU B 213       94.472  22.714   -6.472  1.00 20.00   6
      ATOM    1175  CB   LEU B 213       94.609  21.192   -6.388  1.00 20.00   6
      ATOM    1176  CG   LEU B 213       93.775  20.526   -5.292  1.00 20.00   6
      ATOM    1177  CD1  LEU B 213       93.737  19.035   -5.508  1.00 20.00   6
30    ATOM    1178  CD2  LEU B 213       94.374  20.852   -3.935  1.00 20.00   6
      ATOM    1179  C    LEU B 213       95.503  23.277   -7.449  1.00 20.00   6
      ATOM    1180  O    LEU B 213       95.422  23.033   -8.657  1.00 20.00   8
      ATOM    1181  N    ASN B 214       96.470  24.036   -6.940  1.00 20.00   7
      ATOM    1182  CA   ASN B 214       97.488  24.585   -7.826  1.00 20.00   6
35    ATOM    1183  CB   ASN B 214       98.198  25.792   -7.201  1.00 20.00   6
      ATOM    1184  CG   ASN B 214       98.938  25.448   -5.927  1.00 20.00   6
      ATOM    1185  OD1  ASN B 214       99.267  24.288   -5.669  1.00 20.00   8
      ATOM    1186  ND2  ASN B 214       99.224  26.469   -5.123  1.00 20.00   7
      ATOM    1187  C    ASN B 214       98.508  23.515   -8.182  1.00 20.00   6
40    ATOM    1188  O    ASN B 214       98.420  22.372   -7.725  1.00 20.00   8
      ATOM    1189  N    GLU B 215       99.482  23.894   -8.996  1.00 20.00   7
      ATOM    1190  CA   GLU B 215      100.514  22.965   -9.430  1.00 20.00   6
      ATOM    1191  CB   GLU B 215      101.491  23.687  -10.362  1.00 20.00   6
      ATOM    1192  CG   GLU B 215      102.544  22.788  -10.979  1.00 20.00   6
45    ATOM    1193  CD   GLU B 215      103.323  23.482  -12.080  1.00 20.00   6
      ATOM    1194  OE1  GLU B 215      103.909  24.554  -11.810  1.00 20.00   8
      ATOM    1195  OE2  GLU B 215      103.344  22.957  -13.215  1.00 20.00   8
      ATOM    1196  C    GLU B 215      101.275  22.307   -8.274  1.00 20.00   6
      ATOM    1197  O    GLU B 215      101.801  21.205   -8.428  1.00 20.00   8
50    ATOM    1198  N    ASP B 216      101.335  22.976   -7.123  1.00 20.00   7
      ATOM    1199  CA   ASP B 216      102.036  22.430   -5.958  1.00 20.00   6
      ATOM    1200  CB   ASP B 216      102.727  23.549   -5.179  1.00 20.00   6
      ATOM    1201  CG   ASP B 216      103.952  24.086   -5.896  1.00 20.00   6
      ATOM    1202  OD1  ASP B 216      104.766  23.267   -6.376  1.00 20.00   8
55    ATOM    1203  OD2  ASP B 216      104.110  25.323   -5.973  1.00 20.00   8
      ATOM    1204  C    ASP B 216      101.121  21.651   -5.013  1.00 20.00   6
      ATOM    1205  O    ASP B 216      101.532  21.241   -3.925  1.00 20.00   8
      ATOM    1206  N    MET B 217       99.877  21.463   -5.434  1.00 20.00   7
      ATOM    1207  CA   MET B 217       98.890  20.730   -4.657  1.00 20.00   6
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      ATOM   1208   CB    MET B 217        99.402  19.319  -4.358  1.00 20.00   6
      ATOM   1209   CG    MET B 217        99.456  18.432  -5.601  1.00 20.00   6
      ATOM   1210   SD    MET B 217        97.857  18.342  -6.445  1.00 20.00  16
      ATOM   1211   CE    MET B 217        97.073  16.984  -5.543  1.00 20.00   6
 5    ATOM   1212   C     MET B 217        98.397  21.403  -3.373  1.00 20.00   6
      ATOM   1213   O     MET B 217        97.972  20.730  -2.435  1.00 20.00   8
      ATOM   1214   N     HIS B 218        98.469  22.730  -3.331  1.00 20.00   7
      ATOM   1215   CA    HIS B 218        97.949  23.487  -2.197  1.00 20.00   6
      ATOM   1216   CB    HIS B 218        98.831  24.700  -1.898  1.00 20.00   6
10    ATOM   1217   CG    HIS B 218       100.100  24.357  -1.177  1.00 20.00   6
      ATOM   1218   CD2   HIS B 218       101.390  24.362  -1.588  1.00 20.00   6
      ATOM   1219   ND1   HIS B 218       100.117  23.935   0.136  1.00 20.00   7
      ATOM   1220   CE1   HIS B 218       101.364  23.698   0.504  1.00 20.00   6
      ATOM   1221   NE2   HIS B 218       102.156  23.947  -0.524  1.00 20.00   7
15    ATOM   1222   C     HIS B 218        96.583  23.939  -2.703  1.00 20.00   6
      ATOM   1223   O     HIS B 218        96.400  24.090  -3.910  1.00 20.00   8
      ATOM   1224   N     ILE B 219        95.628  24.160  -1.808  1.00 20.00   7
      ATOM   1225   CA    ILE B 219        94.301  24.562  -2.257  1.00 20.00   6
      ATOM   1226   CB    ILE B 219        93.232  24.359  -1.159  1.00 20.00   6
20    ATOM   1227   CG2   ILE B 219        93.266  22.918  -0.654  1.00 20.00   6
      ATOM   1228   CG1   ILE B 219        93.460  25.353  -0.011  1.00 20.00   6
      ATOM   1229   CD1   ILE B 219        92.351  25.342   1.036  1.00 20.00   6
      ATOM   1230   C     ILE B 219        94.207  26.010  -2.714  1.00 20.00   6
      ATOM   1231   O     ILE B 219        95.044  26.850  -2.375  1.00 20.00   8
25    ATOM   1232   N     GLN B 220        93.168  26.274  -3.497  1.00 20.00   7
      ATOM   1233   CA    GLN B 220        92.859  27.600  -3.999  1.00 20.00   6
      ATOM   1234   CB    GLN B 220        93.537  27.867  -5.350  1.00 20.00   6
      ATOM   1235   CG    GLN B 220        95.011  28.246  -5.216  1.00 20.00   6
      ATOM   1236   CD    GLN B 220        95.599  28.799  -6.503  1.00 20.00   6
30    ATOM   1237   OE1   GLN B 220        95.725  28.086  -7.502  1.00 20.00   8
      ATOM   1238   NE2   GLN B 220        95.957  30.079  -6.486  1.00 20.00   7
      ATOM   1239   C     GLN B 220        91.350  27.626  -4.140  1.00 20.00   6
      ATOM   1240   O     GLN B 220        90.792  27.133  -5.124  1.00 20.00   8
      ATOM   1241   N     ILE B 221        90.689  28.178  -3.129  1.00 20.00   7
35    ATOM   1242   CA    ILE B 221        89.240  28.260  -3.122  1.00 20.00   6
      ATOM   1243   CB    ILE B 221        88.731  28.550  -1.700  1.00 20.00   6
      ATOM   1244   CG2   ILE B 221        87.209  28.707  -1.708  1.00 20.00   6
      ATOM   1245   CG1   ILE B 221        89.164  27.406  -0.773  1.00 20.00   6
      ATOM   1246   CD1   ILE B 221        88.743  27.559   0.668  1.00 20.00   6
40    ATOM   1247   C     ILE B 221        88.760  29.339  -4.092  1.00 20.00   6
      ATOM   1248   O     ILE B 221        89.411  30.374  -4.262  1.00 20.00   8
      ATOM   1249   N     THR B 222        87.633  29.082  -4.748  1.00 20.00   7
      ATOM   1250   CA    THR B 222        87.084  30.039  -5.701  1.00 20.00   6
      ATOM   1251   CB    THR B 222        87.565  29.728  -7.125  1.00 20.00   6
45    ATOM   1252   OG1   THR B 222        87.179  30.795  -8.000  1.00 20.00   8
      ATOM   1253   CG2   THR B 222        86.962  28.410  -7.618  1.00 20.00   6
      ATOM   1254   C     THR B 222        85.554  30.028  -5.683  1.00 20.00   6
      ATOM   1255   O     THR B 222        84.950  29.417  -4.791  1.00 20.00   8
      ATOM   1256   N     ASP B 223        84.949  30.712  -6.659  1.00 20.00   7
50    ATOM   1257   CA    ASP B 223        83.492  30.806  -6.806  1.00 20.00   6
      ATOM   1258   CB    ASP B 223        82.872  29.399  -6.767  1.00 20.00   6
      ATOM   1259   CG    ASP B 223        81.414  29.384  -7.205  1.00 20.00   6
      ATOM   1260   OD1   ASP B 223        80.990  30.335  -7.900  1.00 20.00   8
      ATOM   1261   OD2   ASP B 223        80.701  28.414  -6.866  1.00 20.00   8
55    ATOM   1262   C     ASP B 223        82.878  31.694  -5.725  1.00 20.00   6
      ATOM   1263   O     ASP B 223        82.191  31.208  -4.820  1.00 20.00   8
      ATOM   1264   N     PHE B 224        83.105  33.001  -5.848  1.00 20.00   7
      ATOM   1265   CA    PHE B 224        82.632  33.970  -4.866  1.00 20.00   6
      ATOM   1266   CB    PHE B 224        83.800  34.869  -4.451  1.00 20.00   6
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     ATOM   1267  CG  PHE B 224      84.826  34.165  -3.612  1.00 20.00   6
     ATOM   1268  CD1 PHE B 224      84.590  33.931  -2.261  1.00 20.00   6
     ATOM   1269  CD2 PHE B 224      86.001  33.687  -4.182  1.00 20.00   6
     ATOM   1270  CE1 PHE B 224      85.509  33.227  -1.486  1.00 20.00   6
  5  ATOM   1271  CE2 PHE B 224      86.927  32.981  -3.418  1.00 20.00   6
     ATOM   1272  CZ  PHE B 224      86.679  32.750  -2.068  1.00 20.00   6
     ATOM   1273  C   PHE B 224      81.443  34.839  -5.256  1.00 20.00   6
     ATOM   1274  O   PHE B 224      81.001  35.678  -4.468  1.00 20.00   8
     ATOM   1275  N   GLY B 225      80.928  34.647  -6.463  1.00 20.00   7
 10  ATOM   1276  CA  GLY B 225      79.793  35.438  -6.894  1.00 20.00   6
     ATOM   1277  C   GLY B 225      78.612  35.265  -5.955  1.00 20.00   6
     ATOM   1278  O   GLY B 225      77.824  36.192  -5.753  1.00 20.00   8
     ATOM   1279  N   THR B 226      78.486  34.080  -5.367  1.00 20.00   7
     ATOM   1280  CA  THR B 226      77.379  33.819  -4.459  1.00 20.00   6
 15  ATOM   1281  CB  THR B 226      76.779  32.425  -4.715  1.00 20.00   6
     ATOM   1282  OG1 THR B 226      77.826  31.450  -4.762  1.00 20.00   8
     ATOM   1283  CG2 THR B 226      76.021  32.417  -6.041  1.00 20.00   6
     ATOM   1284  C   THR B 226      77.738  33.957  -2.981  1.00 20.00   6
     ATOM   1285  O   THR B 226      77.001  33.500  -2.107  1.00 20.00   8
 20  ATOM   1286  N   ALA B 227      78.867  34.598  -2.702  1.00 20.00   7
     ATOM   1287  CA  ALA B 227      79.282  34.800  -1.325  1.00 20.00   6
     ATOM   1288  CB  ALA B 227      80.738  35.242  -1.268  1.00 20.00   6
     ATOM   1289  C   ALA B 227      78.384  35.875  -0.726  1.00 20.00   6
     ATOM   1290  O   ALA B 227      77.623  36.529  -1.440  1.00 20.00   8
 25  ATOM   1291  N   LYS B 228      78.467  36.046   0.586  1.00 20.00   7
     ATOM   1292  CA  LYS B 228      77.670  37.051   1.274  1.00 20.00   6
     ATOM   1293  CB  LYS B 228      76.637  36.384   2.179  1.00 20.00   6
     ATOM   1294  CG  LYS B 228      75.705  37.357   2.890  1.00 20.00   6
     ATOM   1295  CD  LYS B 228      74.795  38.072   1.893  1.00 20.00   6
 30  ATOM   1296  CE  LYS B 228      73.849  39.049   2.587  1.00 20.00   6
     ATOM   1297  NZ  LYS B 228      73.000  39.781   1.605  1.00 20.00   7
     ATOM   1298  C   LYS B 228      78.616  37.896   2.110  1.00 20.00   6
     ATOM   1299  O   LYS B 228      79.355  37.366   2.940  1.00 20.00   8
     ATOM   1300  N   VAL B 229      78.603  39.206   1.881  1.00 20.00   7
 35  ATOM   1301  CA  VAL B 229      79.463  40.114   2.626  1.00 20.00   6
     ATOM   1302  CB  VAL B 229      79.976  41.256   1.734  1.00 20.00   6
     ATOM   1303  CG1 VAL B 229      80.853  42.191   2.540  1.00 20.00   6
     ATOM   1304  CG2 VAL B 229      80.746  40.686   0.561  1.00 20.00   6
     ATOM   1305  C   VAL B 229      78.687  40.710   3.793  1.00 20.00   6
 40  ATOM   1306  O   VAL B 229      77.798  41.537   3.599  1.00 20.00   8
     ATOM   1307  N   LEU B 230      79.034  40.284   5.003  1.00 20.00   7
     ATOM   1308  CA  LEU B 230      78.370  40.752   6.213  1.00 20.00   6
     ATOM   1309  CB  LEU B 230      78.740  39.856   7.395  1.00 20.00   6
     ATOM   1310  CG  LEU B 230      78.276  38.403   7.332  1.00 20.00   6
 45  ATOM   1311  CD1 LEU B 230      78.853  37.634   8.508  1.00 20.00   6
     ATOM   1312  CD2 LEU B 230      76.760  38.350   7.339  1.00 20.00   6
     ATOM   1313  C   LEU B 230      78.705  42.193   6.565  1.00 20.00   6
     ATOM   1314  O   LEU B 230      79.768  42.701   6.214  1.00 20.00   8
     ATOM   1315  N   SER B 231      77.781  42.839   7.270  1.00 20.00   7
 50  ATOM   1316  CA  SER B 231      77.957  44.219   7.708  1.00 20.00   6
     ATOM   1317  CB  SER B 231      77.082  45.161   6.875  1.00 20.00   6
     ATOM   1318  OG  SER B 231      75.714  44.795   6.948  1.00 20.00   8
     ATOM   1319  C   SER B 231      77.623  44.373   9.196  1.00 20.00   6
     ATOM   1320  O   SER B 231      78.322  45.086   9.919  1.00 20.00   8
 55  ATOM   1321  N   PRO B 232      76.553  43.705   9.674  1.00 20.00   7
     ATOM   1322  CD  PRO B 232      75.571  42.876   8.948  1.00 20.00   6
     ATOM   1323  CA  PRO B 232      76.182  43.811  11.091  1.00 20.00   6
     ATOM   1324  CB  PRO B 232      75.005  42.844  11.211  1.00 20.00   6
     ATOM   1325  CG  PRO B 232      74.367  42.933   9.862  1.00 20.00   6
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     ATOM   1326  C   PRO B 232      77.332  43.438  12.024  1.00 20.00   6
     ATOM   1327  O   PRO B 232      78.199  42.640  11.666  1.00 20.00   8
     ATOM   1328  N   ALA B 237      74.215  38.132  11.762  1.00 20.00   7
     ATOM   1329  CA  ALA B 237      74.666  37.653  10.460  1.00 20.00   6
  5  ATOM   1330  CB  ALA B 237      75.541  36.417  10.637  1.00 20.00   6
     ATOM   1331  C   ALA B 237      73.479  37.324   9.558  1.00 20.00   6
     ATOM   1332  O   ALA B 237      73.143  36.158   9.374  1.00 20.00   8
     ATOM   1333  N   ALA B 238      72.841  38.347   8.996  1.00 20.00   7
     ATOM   1334  CA  ALA B 238      71.693  38.130   8.117  1.00 20.00   6
 10  ATOM   1335  CB  ALA B 238      70.973  39.450   7.853  1.00 20.00   6
     ATOM   1336  C   ALA B 238      72.123  37.497   6.798  1.00 20.00   6
     ATOM   1337  O   ALA B 238      73.315  37.404   6.500  1.00 20.00   8
     ATOM   1338  N   ALA B 239      71.146  37.057   6.012  1.00 20.00   7
     ATOM   1339  CA  ALA B 239      71.439  36.431   4.728  1.00 20.00   6
 15  ATOM   1340  CB  ALA B 239      72.152  35.123   4.952  1.00 20.00   6
     ATOM   1341  C   ALA B 239      70.173  36.194   3.918  1.00 20.00   6
     ATOM   1342  O   ALA B 239      69.329  37.079   3.825  1.00 20.00   8
     ATOM   1343  N   ASN B 240      70.068  34.996   3.339  1.00 20.00   7
     ATOM   1344  CA  ASN B 240      68.939  34.559   2.514  1.00 20.00   6
 20  ATOM   1345  CB  ASN B 240      67.614  35.160   2.999  1.00 20.00   6
     ATOM   1346  CG  ASN B 240      67.258  36.466   2.299  1.00 20.00   6
     ATOM   1347  OD1 ASN B 240      67.119  36.519   1.068  1.00 20.00   8
     ATOM   1348  ND2 ASN B 240      67.091  37.536   3.089  1.00 20.00   7
     ATOM   1349  C   ASN B 240      69.153  34.937   1.053  1.00 20.00   6
 25  ATOM   1350  O   ASN B 240      70.007  35.767   0.749  1.00 20.00   8
     ATOM   1351  N   ALA B 241      68.365  34.329   0.163  1.00 20.00   7
     ATOM   1352  CA  ALA B 241      68.401  34.570  -1.290  1.00 20.00   6
     ATOM   1353  C   ALA B 241      68.990  33.416  -2.103  1.00 20.00   6
     ATOM   1354  O   ALA B 241      68.353  32.919  -3.030  1.00 20.00   8
 30  ATOM   1355  CB  ALA B 241      69.168  35.859  -1.629  1.00 20.00   6
     ATOM   1356  N   PHE B 242      70.205  33.000  -1.762  1.00 20.00   7
     ATOM   1357  CA  PHE B 242      70.875  31.918  -2.481  1.00 20.00   6
     ATOM   1358  CB  PHE B 242      72.259  32.379  -2.952  1.00 20.00   6
     ATOM   1359  CG  PHE B 242      73.102  31.273  -3.521  1.00 20.00   6
 35  ATOM   1360  CD1 PHE B 242      72.843  30.767  -4.790  1.00 20.00   6
     ATOM   1361  CD2 PHE B 242      74.136  30.713  -2.773  1.00 20.00   6
     ATOM   1362  CE1 PHE B 242      73.599  29.718  -5.310  1.00 20.00   6
     ATOM   1363  CE2 PHE B 242      74.896  29.666  -3.281  1.00 20.00   6
     ATOM   1364  CZ  PHE B 242      74.627  29.166  -4.553  1.00 20.00   6
 40  ATOM   1365  C   PHE B 242      71.038  30.652  -1.646  1.00 20.00   6
     ATOM   1366  O   PHE B 242      71.213  30.716  -0.431  1.00 20.00   8
     ATOM   1367  N   VAL B 243      70.988  29.505  -2.318  1.00 20.00   7
     ATOM   1368  CA  VAL B 243      71.157  28.204  -1.675  1.00 20.00   6
     ATOM   1369  CB  VAL B 243      69.828  27.420  -1.617  1.00 20.00   6
 45  ATOM   1370  CG1 VAL B 243      70.066  26.023  -1.050  1.00 20.00   6
     ATOM   1371  CG2 VAL B 243      68.825  28.177  -0.766  1.00 20.00   6
     ATOM   1372  C   VAL B 243      72.164  27.394  -2.486  1.00 20.00   6
     ATOM   1373  O   VAL B 243      71.894  27.014  -3.628  1.00 20.00   8
     ATOM   1374  N   GLY B 244      73.323  27.137  -1.890  1.00 20.00   7
 50  ATOM   1375  CA  GLY B 244      74.364  26.385  -2.569  1.00 20.00   6
     ATOM   1376  C   GLY B 244      74.019  24.944  -2.911  1.00 20.00   6
     ATOM   1377  O   GLY B 244      72.867  24.524  -2.810  1.00 20.00   8
     ATOM   1378  N   THR B 245      75.032  24.184  -3.315  1.00 20.00   7
     ATOM   1379  CA  THR B 245      74.858  22.787  -3.691  1.00 20.00   6
 55  ATOM   1380  CB  THR B 245      76.214  22.161  -4.046  1.00 20.00   6
     ATOM   1381  OG1 THR B 245      76.794  22.911  -5.120  1.00 20.00   8
     ATOM   1382  CG2 THR B 245      76.049  20.710  -4.485  1.00 20.00   6
     ATOM   1383  C   THR B 245      74.174  22.003  -2.579  1.00 20.00   6
     ATOM   1384  O   THR B 245      74.643  21.969  -1.441  1.00 20.00   8
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     ATOM    1385  N   ALA B 246      73.061  21.372  -2.937  1.00 20.00   7
     ATOM    1386  CA  ALA B 246      72.229  20.615  -2.008  1.00 20.00   6
     ATOM    1387  CB  ALA B 246      71.266  19.723  -2.793  1.00 20.00   6
     ATOM    1388  C   ALA B 246      72.936  19.789  -0.941  1.00 20.00   6
 5   ATOM    1389  O   ALA B 246      72.611  19.894   0.239  1.00 20.00   8
     ATOM    1390  N   GLN B 247      73.902  18.973  -1.339  1.00 20.00   7
     ATOM    1391  CA  GLN B 247      74.580  18.121  -0.371  1.00 20.00   6
     ATOM    1392  CB  GLN B 247      75.535  17.168  -1.096  1.00 20.00   6
     ATOM    1393  CG  GLN B 247      75.110  16.823  -2.520  1.00 20.00   6
10   ATOM    1394  CD  GLN B 247      75.139  15.336  -2.811  1.00 20.00   6
     ATOM    1395  OE1 GLN B 247      75.963  14.602  -2.270  1.00 20.00   8
     ATOM    1396  NE2 GLN B 247      74.246  14.887  -3.686  1.00 20.00   7
     ATOM    1397  C   GLN B 247      75.343  18.873   0.720  1.00 20.00   6
     ATOM    1398  O   GLN B 247      75.631  18.306   1.773  1.00 20.00   8
15   ATOM    1399  N   TYR B 248      75.648  20.147   0.484  1.00 20.00   7
     ATOM    1400  CA  TYR B 248      76.405  20.941   1.454  1.00 20.00   6
     ATOM    1401  CB  TYR B 248      77.642  21.531   0.767  1.00 20.00   6
     ATOM    1402  CG  TYR B 248      78.447  20.471   0.052  1.00 20.00   6
     ATOM    1403  CD1 TYR B 248      79.329  19.648   0.750  1.00 20.00   6
20   ATOM    1404  CE1 TYR B 248      79.979  18.589   0.115  1.00 20.00   6
     ATOM    1405  CD2 TYR B 248      78.243  20.220  -1.306  1.00 20.00   6
     ATOM    1406  CE2 TYR B 248      78.884  19.167  -1.951  1.00 20.00   6
     ATOM    1407  CZ  TYR B 248      79.748  18.352  -1.232  1.00 20.00   6
     ATOM    1408  OH  TYR B 248      80.348  17.280  -1.852  1.00 20.00   8
25   ATOM    1409  C   TYR B 248      75.596  22.055   2.118  1.00 20.00   6
     ATOM    1410  O   TYR B 248      76.132  22.824   2.917  1.00 20.00   8
     ATOM    1411  N   VAL B 249      74.309  22.135   1.798  1.00 20.00   7
     ATOM    1412  CA  VAL B 249      73.452  23.162   2.376  1.00 20.00   6
     ATOM    1413  CB  VAL B 249      72.071  23.174   1.695  1.00 20.00   6
30   ATOM    1414  CG1 VAL B 249      71.117  24.100   2.442  1.00 20.00   6
     ATOM    1415  CG2 VAL B 249      72.225  23.632   0.264  1.00 20.00   6
     ATOM    1416  C   VAL B 249      73.262  22.964   3.875  1.00 20.00   6
     ATOM    1417  O   VAL B 249      73.027  21.847   4.341  1.00 20.00   8
     ATOM    1418  N   SER B 250      73.373  24.055   4.628  1.00 20.00   7
35   ATOM    1419  CA  SER B 250      73.206  24.008   6.076  1.00 20.00   6
     ATOM    1420  CB  SER B 250      73.921  25.198   6.738  1.00 20.00   6
     ATOM    1421  OG  SER B 250      73.428  26.440   6.257  1.00 20.00   8
     ATOM    1422  C   SER B 250      71.717  24.049   6.405  1.00 20.00   6
     ATOM    1423  O   SER B 250      70.920  24.577   5.636  1.00 20.00   8
40   ATOM    1424  N   PRO B 251      71.322  23.479   7.550  1.00 20.00   7
     ATOM    1425  CD  PRO B 251      72.130  22.770   8.558  1.00 20.00   6
     ATOM    1426  CA  PRO B 251      69.905  23.484   7.925  1.00 20.00   6
     ATOM    1427  CB  PRO B 251      69.892  22.714   9.252  1.00 20.00   6
     ATOM    1428  CG  PRO B 251      71.290  22.936   9.801  1.00 20.00   6
45   ATOM    1429  C   PRO B 251      69.265  24.870   8.032  1.00 20.00   6
     ATOM    1430  O   PRO B 251      68.093  25.036   7.688  1.00 20.00   8
     ATOM    1431  N   GLU B 252      70.017  25.867   8.492  1.00 20.00   7
     ATOM    1432  CA  GLU B 252      69.462  27.216   8.625  1.00 20.00   6
     ATOM    1433  CB  GLU B 252      70.503  28.193   9.196  1.00 20.00   6
50   ATOM    1434  CG  GLU B 252      71.838  28.180   8.477  1.00 20.00   6
     ATOM    1435  CD  GLU B 252      72.844  27.257   9.139  1.00 20.00   6
     ATOM    1436  OE1 GLU B 252      72.429  26.207   9.675  1.00 20.00   8
     ATOM    1437  OE2 GLU B 252      74.053  27.581   9.118  1.00 20.00   8
     ATOM    1438  C   GLU B 252      68.928  27.744   7.292  1.00 20.00   6
55   ATOM    1439  O   GLU B 252      67.927  28.459   7.261  1.00 20.00   8
     ATOM    1440  N   LEU B 253      69.584  27.395   6.189  1.00 20.00   7
     ATOM    1441  CA  LEU B 253      69.117  27.850   4.883  1.00 20.00   6
     ATOM    1442  CB  LEU B 253      70.140  27.527   3.794  1.00 20.00   6
     ATOM    1443  CG  LEU B 253      71.127  28.635   3.421  1.00 20.00   6
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      ATOM   1444  CD1 LEU B 253     72.121  28.851   4.547  1.00 20.00   6
      ATOM   1445  CD2 LEU B 253     71.858  28.250   2.140  1.00 20.00   6
      ATOM   1446  C   LEU B 253     67.774  27.227   4.496  1.00 20.00   6
      ATOM   1447  O   LEU B 253     66.997  27.826   3.751  1.00 20.00   8
   5  ATOM   1448  N   LEU B 254     67.506  26.029   5.002  1.00 20.00   7
      ATOM   1449  CA  LEU B 254     66.271  25.316   4.689  1.00 20.00   6
      ATOM   1450  CB  LEU B 254     66.539  23.809   4.689  1.00 20.00   6
      ATOM   1451  CG  LEU B 254     67.647  23.322   3.746  1.00 20.00   6
      ATOM   1452  CD1 LEU B 254     67.983  21.873   4.057  1.00 20.00   6
  10  ATOM   1453  CD2 LEU B 254     67.204  23.475   2.302  1.00 20.00   6
      ATOM   1454  C   LEU B 254     65.135  25.626   5.662  1.00 20.00   6
      ATOM   1455  O   LEU B 254     63.959  25.524   5.312  1.00 20.00   8
      ATOM   1456  N   THR B 255     65.483  26.010   6.883  1.00 20.00   7
      ATOM   1457  CA  THR B 255     64.472  26.308   7.884  1.00 20.00   6
  15  ATOM   1458  CB  THR B 255     64.876  25.747   9.252  1.00 20.00   6
      ATOM   1459  OG1 THR B 255     66.154  26.277   9.619  1.00 20.00   8
      ATOM   1460  CG2 THR B 255     64.958  24.230   9.202  1.00 20.00   6
      ATOM   1461  C   THR B 255     64.205  27.795   8.035  1.00 20.00   6
      ATOM   1462  O   THR B 255     63.072  28.241   7.897  1.00 20.00   8
  20  ATOM   1463  N   GLU B 256     65.250  28.560   8.314  1.00 20.00   7
      ATOM   1464  CA  GLU B 256     65.115  30.001   8.507  1.00 20.00   6
      ATOM   1465  CB  GLU B 256     66.015  30.444   9.659  1.00 20.00   6
      ATOM   1466  CG  GLU B 256     65.634  29.818  10.987  1.00 20.00   6
      ATOM   1467  CD  GLU B 256     66.736  29.922  12.018  1.00 20.00   6
  25  ATOM   1468  OE1 GLU B 256     67.249  31.041  12.232  1.00 20.00   8
      ATOM   1469  OE2 GLU B 256     67.086  28.884  12.619  1.00 20.00   8
      ATOM   1470  C   GLU B 256     65.439  30.815   7.262  1.00 20.00   6
      ATOM   1471  O   GLU B 256     65.268  32.034   7.252  1.00 20.00   8
      ATOM   1472  N   LYS B 257     65.906  30.141   6.215  1.00 20.00   7
  30  ATOM   1473  CA  LYS B 257     66.260  30.814   4.970  1.00 20.00   6
      ATOM   1474  CB  LYS B 257     65.015  31.458   4.352  1.00 20.00   6
      ATOM   1475  CG  LYS B 257     65.184  31.918   2.915  1.00 20.00   6
      ATOM   1476  CD  LYS B 257     63.885  32.497   2.378  1.00 20.00   6
      ATOM   1477  CE  LYS B 257     63.994  32.841   0.902  1.00 20.00   6
  35  ATOM   1478  NZ  LYS B 257     65.060  33.847   0.640  1.00 20.00   7
      ATOM   1479  C   LYS B 257     67.309  31.885   5.263  1.00 20.00   6
      ATOM   1480  O   LYS B 257     67.270  32.977   4.702  1.00 20.00   8
      ATOM   1481  N   SER B 258     68.243  31.563   6.152  1.00 20.00   7
      ATOM   1482  CA  SER B 258     69.300  32.494   6.527  1.00 20.00   6
  40  ATOM   1483  CB  SER B 258     69.043  33.028   7.937  1.00 20.00   6
      ATOM   1484  OG  SER B 258     68.893  31.962   8.859  1.00 20.00   8
      ATOM   1485  C   SER B 258     70.675  31.829   6.467  1.00 20.00   6
      ATOM   1486  O   SER B 258     70.786  30.602   6.542  1.00 20.00   8
      ATOM   1487  N   ALA B 259     71.718  32.641   6.329  1.00 20.00   7
  45  ATOM   1488  CA  ALA B 259     73.081  32.130   6.252  1.00 20.00   6
      ATOM   1489  CB  ALA B 259     73.549  32.121   4.809  1.00 20.00   6
      ATOM   1490  C   ALA B 259     74.031  32.966   7.102  1.00 20.00   6
      ATOM   1491  O   ALA B 259     73.882  34.185   7.211  1.00 20.00   8
      ATOM   1492  N   CYS B 260     75.008  32.298   7.704  1.00 20.00   7
  50  ATOM   1493  CA  CYS B 260     75.993  32.960   8.550  1.00 20.00   6
      ATOM   1494  CB  CYS B 260     75.574  32.865  10.017  1.00 20.00   6
      ATOM   1495  SG  CYS B 260     75.303  31.165  10.594  1.00 20.00  16
      ATOM   1496  C   CYS B 260     77.328  32.265   8.349  1.00 20.00   6
      ATOM   1497  O   CYS B 260     77.410  31.280   7.620  1.00 20.00   8
  55  ATOM   1498  N   LYS B 261     78.371  32.775   8.993  1.00 20.00   7
      ATOM   1499  CA  LYS B 261     79.691  32.174   8.869  1.00 20.00   6
      ATOM   1500  CB  LYS B 261     80.676  32.851   9.821  1.00 20.00   6
      ATOM   1501  CG  LYS B 261     80.985  34.296   9.472  1.00 20.00   6
      ATOM   1502  CD  LYS B 261     81.961  34.878  10.475  1.00 20.00   6
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      ATOM   1503   CE   LYS B 261      82.157  36.365  10.259  1.00  20.00  6
      ATOM   1504   NZ   LYS B 261      83.085  36.922  11.278  1.00  20.00  7
      ATOM   1505   C    LYS B 261      79.632  30.687   9.187  1.00  20.00  6
      ATOM   1506   O    LYS B 261      80.258  29.877   8.512  1.00  20.00  8
  5   ATOM   1507   N    SER B 262      78.860  30.346  10.214  1.00  20.00  7
      ATOM   1508   CA   SER B 262      78.716  28.966  10.659  1.00  20.00  6
      ATOM   1509   CB   SER B 262      77.806  28.913  11.895  1.00  20.00  6
      ATOM   1510   OG   SER B 262      77.884  27.657  12.546  1.00  20.00  8
      ATOM   1511   C    SER B 262      78.161  28.070   9.549  1.00  20.00  6
 10   ATOM   1512   O    SER B 262      78.350  26.856   9.575  1.00  20.00  8
      ATOM   1513   N    SER B 263      77.466  28.660   8.581  1.00  20.00  7
      ATOM   1514   CA   SER B 263      76.938  27.870   7.472  1.00  20.00  6
      ATOM   1515   CB   SER B 263      76.132  28.750   6.507  1.00  20.00  6
      ATOM   1516   OG   SER B 263      75.011  29.329   7.156  1.00  20.00  8
 15   ATOM   1517   C    SER B 263      78.123  27.244   6.737  1.00  20.00  6
      ATOM   1518   O    SER B 263      78.038  26.108   6.273  1.00  20.00  8
      ATOM   1519   N    ASP B 264      79.234  27.977   6.642  1.00  20.00  7
      ATOM   1520   CA   ASP B 264      80.419  27.448   5.961  1.00  20.00  6
      ATOM   1521   CB   ASP B 264      81.478  28.538   5.745  1.00  20.00  6
 20   ATOM   1522   CG   ASP B 264      81.091  29.539   4.673  1.00  20.00  6
      ATOM   1523   OD1  ASP B 264      80.286  29.187   3.786  1.00  20.00  8
      ATOM   1524   OD2  ASP B 264      81.617  30.676   4.704  1.00  20.00  8
      ATOM   1525   C    ASP B 264      81.043  26.312   6.771  1.00  20.00  6
      ATOM   1526   O    ASP B 264      81.586  25.365   6.201  1.00  20.00  8
 25   ATOM   1527   N    LEU B 265      80.971  26.415   8.099  1.00  20.00  7
      ATOM   1528   CA   LEU B 265      81.532  25.390   8.974  1.00  20.00  6
      ATOM   1529   CB   LEU B 265      81.491  25.848  10.438  1.00  20.00  6
      ATOM   1530   CG   LEU B 265      82.419  27.035  10.746  1.00  20.00  6
      ATOM   1531   CD1  LEU B 265      82.204  27.532  12.177  1.00  20.00  6
 30   ATOM   1532   CD2  LEU B 265      83.864  26.608  10.541  1.00  20.00  6
      ATOM   1533   C    LEU B 265      80.750  24.094   8.800  1.00  20.00  6
      ATOM   1534   O    LEU B 265      81.306  23.004   8.910  1.00  20.00  8
      ATOM   1535   N    TRP B 266      79.454  24.208   8.530  1.00  20.00  7
      ATOM   1536   CA   TRP B 266      78.646  23.017   8.309  1.00  20.00  6
 35   ATOM   1537   CB   TRP B 266      77.167  23.384   8.148  1.00  20.00  6
      ATOM   1538   CG   TRP B 266      76.310  22.245   7.646  1.00  20.00  6
      ATOM   1539   CD2  TRP B 266      75.455  21.399   8.426  1.00  20.00  6
      ATOM   1540   CE2  TRP B 266      74.881  20.455   7.542  1.00  20.00  6
      ATOM   1541   CE3  TRP B 266      75.117  21.345   9.785  1.00  20.00  6
 40   ATOM   1542   CD1  TRP B 266      76.220  21.792   6.356  1.00  20.00  6
      ATOM   1543   NE1  TRP B 266      75.365  20.719   6.288  1.00  20.00  7
      ATOM   1544   CZ2  TRP B 266      73.988  19.466   7.975  1.00  20.00  6
      ATOM   1545   CZ3  TRP B 266      74.227  20.359  10.216  1.00  20.00  6
      ATOM   1546   CH2  TRP B 266      73.674  19.434   9.310  1.00  20.00  6
 45   ATOM   1547   C    TRP B 266      79.169  22.356   7.038  1.00  20.00  6
      ATOM   1548   O    TRP B 266      79.356  21.142   6.988  1.00  20.00  8
      ATOM   1549   N    ALA B 267      79.411  23.164   6.011  1.00  20.00  7
      ATOM   1550   CA   ALA B 267      79.930  22.646   4.751  1.00  20.00  6
      ATOM   1551   CB   ALA B 267      80.089  23.772   3.746  1.00  20.00  6
 50   ATOM   1552   C    ALA B 267      81.277  21.976   5.016  1.00  20.00  6
      ATOM   1553   O    ALA B 267      81.570  20.914   4.471  1.00  20.00  8
      ATOM   1554   N    LEU B 268      82.091  22.596   5.864  1.00  20.00  7
      ATOM   1555   CA   LEU B 268      83.393  22.030   6.209  1.00  20.00  6
      ATOM   1556   CB   LEU B 268      84.092  22.898   7.264  1.00  20.00  6
 55   ATOM   1557   CG   LEU B 268      85.379  22.332   7.879  1.00  20.00  6
      ATOM   1558   CD1  LEU B 268      86.442  22.192   6.803  1.00  20.00  6
      ATOM   1559   CD2  LEU B 268      85.872  23.263   9.006  1.00  20.00  6
      ATOM   1560   C    LEU B 268      83.193  20.617   6.753  1.00  20.00  6
      ATOM   1561   O    LEU B 268      83.903  19.684   6.372  1.00  20.00  8
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      ATOM   1562  N    GLY B 269       82.220  20.463   7.645  1.00 20.00   7
      ATOM   1563  CA   GLY B 269       81.947  19.156   8.217  1.00 20.00   6
      ATOM   1564  C    GLY B 269       81.597  18.125   7.156  1.00 20.00   6
      ATOM   1565  O    GLY B 269       82.025  16.971   7.239  1.00 20.00   8
  5   ATOM   1566  N    CYS B 270       80.819  18.530   6.155  1.00 20.00   7
      ATOM   1567  CA   CYS B 270       80.445  17.613   5.083  1.00 20.00   6
      ATOM   1568  CB   CYS B 270       79.413  18.255   4.148  1.00 20.00   6
      ATOM   1569  SG   CYS B 270       77.824  18.654   4.905  1.00 20.00  16
      ATOM   1570  C    CYS B 270       81.682  17.241   4.265  1.00 20.00   6
 10   ATOM   1571  O    CYS B 270       81.852  16.090   3.866  1.00 20.00   8
      ATOM   1572  N    ILE B 271       82.541  18.226   4.012  1.00 20.00   7
      ATOM   1573  CA   ILE B 271       83.751  18.000   3.229  1.00 20.00   6
      ATOM   1574  CB   ILE B 271       84.436  19.339   2.903  1.00 20.00   6
      ATOM   1575  CG2  ILE B 271       85.784  19.098   2.227  1.00 20.00   6
 15   ATOM   1576  CG1  ILE B 271       83.508  20.171   2.007  1.00 20.00   6
      ATOM   1577  CD1  ILE B 271       83.962  21.607   1.815  1.00 20.00   6
      ATOM   1578  C    ILE B 271       84.729  17.063   3.934  1.00 20.00   6
      ATOM   1579  O    ILE B 271       85.300  16.174   3.304  1.00 20.00   8
      ATOM   1580  N    ILE B 272       84.927  17.258   5.236  1.00 20.00   7
 20   ATOM   1581  CA   ILE B 272       85.820  16.382   5.987  1.00 20.00   6
      ATOM   1582  CB   ILE B 272       85.902  16.790   7.471  1.00 20.00   6
      ATOM   1583  CG2  ILE B 272       86.623  15.703   8.277  1.00 20.00   6
      ATOM   1584  CG1  ILE B 272       86.646  18.120   7.606  1.00 20.00   6
      ATOM   1585  CD1  ILE B 272       86.553  18.723   9.011  1.00 20.00   6
 25   ATOM   1586  C    ILE B 272       85.274  14.957   5.901  1.00 20.00   6
      ATOM   1587  O    ILE B 272       86.021  14.003   5.679  1.00 20.00   8
      ATOM   1588  N    TYR B 273       83.964  14.822   6.072  1.00 20.00   7
      ATOM   1589  CA   TYR B 273       83.324  13.518   6.006  1.00 20.00   6
      ATOM   1590  CB   TYR B 273       81.825  13.651   6.287  1.00 20.00   6
 30   ATOM   1591  CG   TYR B 273       81.064  12.340   6.250  1.00 20.00   6
      ATOM   1592  CD1  TYR B 273       80.806  11.690   5.041  1.00 20.00   6
      ATOM   1593  CE1  TYR B 273       80.107  10.486   5.005  1.00 20.00   6
      ATOM   1594  CD2  TYR B 273       80.601  11.750   7.427  1.00 20.00   6
      ATOM   1595  CE2  TYR B 273       79.904  10.548   7.405  1.00 20.00   6
 35   ATOM   1596  CZ   TYR B 273       79.659   9.922   6.192  1.00 20.00   6
      ATOM   1597  OH   TYR B 273       78.971   8.736   6.174  1.00 20.00   8
      ATOM   1598  C    TYR B 273       83.550  12.897   4.632  1.00 20.00   6
      ATOM   1599  O    TYR B 273       83.865  11.713   4.526  1.00 20.00   8
      ATOM   1600  N    GLN B 274       83.402  13.705   3.586  1.00 20.00   7
 40   ATOM   1601  CA   GLN B 274       83.579  13.230   2.220  1.00 20.00   6
      ATOM   1602  CB   GLN B 274       83.176  14.322   1.222  1.00 20.00   6
      ATOM   1603  CG   GLN B 274       83.149  13.857  -0.230  1.00 20.00   6
      ATOM   1604  CD   GLN B 274       82.558  14.898  -1.169  1.00 20.00   6
      ATOM   1605  OE1  GLN B 274       82.108  15.961  -0.736  1.00 20.00   8
 45   ATOM   1606  NE2  GLN B 274       82.548  14.591  -2.462  1.00 20.00   7
      ATOM   1607  C    GLN B 274       85.013  12.788   1.953  1.00 20.00   6
      ATOM   1608  O    GLN B 274       85.239  11.818   1.233  1.00 20.00   8
      ATOM   1609  N    LEU B 275       85.981  13.498   2.528  1.00 20.00   7
      ATOM   1610  CA   LEU B 275       87.389  13.143   2.333  1.00 20.00   6
 50   ATOM   1611  CB   LEU B 275       88.311  14.194   2.971  1.00 20.00   6
      ATOM   1612  CG   LEU B 275       88.418  15.561   2.284  1.00 20.00   6
      ATOM   1613  CD1  LEU B 275       89.325  16.481   3.088  1.00 20.00   6
      ATOM   1614  CD2  LEU B 275       88.966  15.379   0.879  1.00 20.00   6
      ATOM   1615  C    LEU B 275       87.697  11.779   2.940  1.00 20.00   6
 55   ATOM   1616  O    LEU B 275       88.430  10.981   2.354  1.00 20.00   8
      ATOM   1617  N    VAL B 276       87.125  11.519   4.112  1.00 20.00   7
      ATOM   1618  CA   VAL B 276       87.353  10.269   4.827  1.00 20.00   6
      ATOM   1619  CB   VAL B 276       87.096  10.451   6.342  1.00 20.00   6
      ATOM   1620  CG1  VAL B 276       87.376   9.148   7.082  1.00 20.00   6
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      ATOM   1621  CG2 VAL B 276      87.973  11.580   6.891  1.00 20.00   6
      ATOM   1622  C   VAL B 276      86.504   9.089   4.336  1.00 20.00   6
      ATOM   1623  O   VAL B 276      87.005   7.973   4.195  1.00 20.00   8
      ATOM   1624  N   ALA B 277      85.222   9.337   4.090  1.00 20.00   7
 5    ATOM   1625  CA  ALA B 277      84.310   8.291   3.643  1.00 20.00   6
      ATOM   1626  CB  ALA B 277      82.898   8.597   4.124  1.00 20.00   6
      ATOM   1627  C   ALA B 277      84.315   8.115   2.130  1.00 20.00   6
      ATOM   1628  O   ALA B 277      84.036   7.029   1.627  1.00 20.00   8
      ATOM   1629  N   GLY B 278      84.632   9.180   1.405  1.00 20.00   7
10    ATOM   1630  CA  GLY B 278      84.653   9.099  -0.041  1.00 20.00   6
      ATOM   1631  C   GLY B 278      83.365   9.627  -0.644  1.00 20.00   6
      ATOM   1632  O   GLY B 278      83.272   9.817  -1.860  1.00 20.00   8
      ATOM   1633  N   LEU B 279      82.375   9.867   0.211  1.00 20.00   7
      ATOM   1634  CA  LEU B 279      81.075  10.382  -0.219  1.00 20.00   6
15    ATOM   1635  CB  LEU B 279      80.070   9.232  -0.375  1.00 20.00   6
      ATOM   1636  CG  LEU B 279      80.342   8.114  -1.385  1.00 20.00   6
      ATOM   1637  CD1 LEU B 279      79.311   7.009  -1.191  1.00 20.00   6
      ATOM   1638  CD2 LEU B 279      80.291   8.660  -2.804  1.00 20.00   6
      ATOM   1639  C   LEU B 279      80.522  11.369   0.812  1.00 20.00   6
20    ATOM   1640  O   LEU B 279      80.750  11.218   2.007  1.00 20.00   8
      ATOM   1641  N   PRO B 280      79.787  12.395   0.361  1.00 20.00   7
      ATOM   1642  CD  PRO B 280      79.403  12.730  -1.020  1.00 20.00   6
      ATOM   1643  CA  PRO B 280      79.230  13.361   1.314  1.00 20.00   6
      ATOM   1644  CB  PRO B 280      78.569  14.397   0.407  1.00 20.00   6
25    ATOM   1645  CG  PRO B 280      78.191  13.598  -0.802  1.00 20.00   6
      ATOM   1646  C   PRO B 280      78.242  12.662   2.262  1.00 20.00   6
      ATOM   1647  O   PRO B 280      77.666  11.633   1.913  1.00 20.00   8
      ATOM   1648  N   PRO B 281      78.035  13.220   3.470  1.00 20.00   7
      ATOM   1649  CD  PRO B 281      78.571  14.535   3.859  1.00 20.00   6
30    ATOM   1650  CA  PRO B 281      77.145  12.701   4.520  1.00 20.00   6
      ATOM   1651  CB  PRO B 281      77.262  13.746   5.634  1.00 20.00   6
      ATOM   1652  CG  PRO B 281      78.564  14.450   5.344  1.00 20.00   6
      ATOM   1653  C   PRO B 281      75.679  12.485   4.142  1.00 20.00   6
      ATOM   1654  O   PRO B 281      75.094  11.441   4.442  1.00 20.00   8
35    ATOM   1655  N   PHE B 282      75.088  13.487   3.504  1.00 20.00   7
      ATOM   1656  CA  PHE B 282      73.686  13.427   3.123  1.00 20.00   6
      ATOM   1657  CB  PHE B 282      73.006  14.734   3.531  1.00 20.00   6
      ATOM   1658  CG  PHE B 282      73.300  15.146   4.947  1.00 20.00   6
      ATOM   1659  CD1 PHE B 282      72.624  14.560   6.013  1.00 20.00   6
40    ATOM   1660  CD2 PHE B 282      74.295  16.085   5.218  1.00 20.00   6
      ATOM   1661  CE1 PHE B 282      72.934  14.902   7.331  1.00 20.00   6
      ATOM   1662  CE2 PHE B 282      74.613  16.433   6.530  1.00 20.00   6
      ATOM   1663  CZ  PHE B 282      73.930  15.840   7.591  1.00 20.00   6
      ATOM   1664  C   PHE B 282      73.527  13.191   1.628  1.00 20.00   6
45    ATOM   1665  O   PHE B 282      73.797  14.079   0.819  1.00 20.00   8
      ATOM   1666  N   ARG B 283      73.080  11.994   1.267  1.00 20.00   7
      ATOM   1667  CA  ARG B 283      72.888  11.635  -0.134  1.00 20.00   6
      ATOM   1668  CB  ARG B 283      73.931  10.598  -0.559  1.00 20.00   6
      ATOM   1669  CG  ARG B 283      75.358  10.928  -0.151  1.00 20.00   6
50    ATOM   1670  CD  ARG B 283      76.326   9.883  -0.687  1.00 20.00   6
      ATOM   1671  NE  ARG B 283      76.054   8.555  -0.142  1.00 20.00   7
      ATOM   1672  CZ  ARG B 283      76.404   8.159   1.077  1.00 20.00   6
      ATOM   1673  NH1 ARG B 283      77.047   8.986   1.893  1.00 20.00   7
      ATOM   1674  NH2 ARG B 283      76.108   6.933   1.484  1.00 20.00   7
55    ATOM   1675  C   ARG B 283      71.493  11.046  -0.331  1.00 20.00   6
      ATOM   1676  O   ARG B 283      70.957  10.391   0.563  1.00 20.00   8
      ATOM   1677  N   ALA B 284      70.911  11.276  -1.502  1.00 20.00   7
      ATOM   1678  CA  ALA B 284      69.579  10.755  -1.796  1.00 20.00   6
      ATOM   1679  CB  ALA B 284      68.532  11.484  -0.961  1.00 20.00   6
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	ATOM	1680	C	ALA B 284	69.278	10.921	-3.273	1.00	20.00	6
	ATOM	1681	O	ALA B 284	70.007	11.611	-3.984	1.00	20.00	8
	ATOM	1682	N	GLY B 285	68.191	10.299	-3.722	1.00	20.00	7
	ATOM	1683	CA	GLY B 285	67.807	10.360	-5.122	1.00	20.00	6
5	ATOM	1684	C	GLY B 285	67.561	11.737	-5.707	1.00	20.00	6
	ATOM	1685	O	GLY B 285	67.775	11.955	-6.899	1.00	20.00	8
	ATOM	1686	N	ASN B 286	67.089	12.673	-4.892	1.00	20.00	7
	ATOM	1687	CA	ASN B 286	66.835	14.018	-5.386	1.00	20.00	6
	ATOM	1688	CB	ASN B 286	65.403	14.137	-5.930	1.00	20.00	6
10	ATOM	1689	CG	ASN B 286	64.342	13.825	-4.885	1.00	20.00	6
	ATOM	1690	OD1	ASN B 286	64.292	14.450	-3.826	1.00	20.00	8
	ATOM	1691	ND2	ASN B 286	63.477	12.861	-5.190	1.00	20.00	7
	ATOM	1692	C	ASN B 286	67.076	15.042	-4.291	1.00	20.00	6
	ATOM	1693	O	ASN B 286	67.368	14.682	-3.152	1.00	20.00	8
15	ATOM	1694	N	GLU B 287	66.955	16.317	-4.636	1.00	20.00	7
	ATOM	1695	CA	GLU B 287	67.185	17.377	-3.669	1.00	20.00	6
	ATOM	1696	CB	GLU B 287	67.181	18.738	-4.365	1.00	20.00	6
	ATOM	1697	CG	GLU B 287	68.537	19.095	-4.944	1.00	20.00	6
	ATOM	1698	CD	GLU B 287	68.524	20.385	-5.735	1.00	20.00	6
20	ATOM	1699	OE1	GLU B 287	67.911	21.371	-5.267	1.00	20.00	8
	ATOM	1700	OE2	GLU B 287	69.144	20.410	-6.823	1.00	20.00	8
	ATOM	1701	C	GLU B 287	66.225	17.394	-2.492	1.00	20.00	6
	ATOM	1702	O	GLU B 287	66.658	17.554	-1.354	1.00	20.00	8
	ATOM	1703	N	TYR B 288	64.932	17.233	-2.753	1.00	20.00	7
25	ATOM	1704	CA	TYR B 288	63.955	17.239	-1.670	1.00	20.00	6
	ATOM	1705	CB	TYR B 288	62.553	16.899	-2.184	1.00	20.00	6
	ATOM	1706	CG	TYR B 288	61.530	16.780	-1.070	1.00	20.00	6
	ATOM	1707	CD1	TYR B 288	60.984	17.470	-0.470	1.00	20.00	6
	ATOM	1708	CE1	TYR B 288	60.090	17.814	0.600	1.00	20.00	6
30	ATOM	1709	CD2	TYR B 288	61.154	15.529	-0.573	1.00	20.00	6
	ATOM	1710	CE2	TYR B 288	60.265	15.414	0.498	1.00	20.00	6
	ATOM	1711	CZ	TYR B 288	59.740	16.561	1.078	1.00	20.00	6
	ATOM	1712	OH	TYR B 288	58.884	16.454	2.149	1.00	20.00	8
	ATOM	1713	C	TYR B 288	64.337	16.238	-0.587	1.00	20.00	6
35	ATOM	1714	O	TYR B 288	64.254	16.545	0.598	1.00	20.00	8
	ATOM	1715	N	LEU B 289	64.750	15.041	-1.001	1.00	20.00	7
	ATOM	1716	CA	LEU B 289	65.137	13.989	-0.064	1.00	20.00	6
	ATOM	1717	CB	LEU B 289	65.283	12.649	-0.797	1.00	20.00	6
	ATOM	1718	CG	LEU B 289	63.984	11.985	-1.274	1.00	20.00	6
40	ATOM	1719	CD1	LEU B 289	64.314	10.802	-2.179	1.00	20.00	6
	ATOM	1720	CD2	LEU B 289	63.160	11.530	-0.068	1.00	20.00	6
	ATOM	1721	C	LEU B 289	66.431	14.310	0.685	1.00	20.00	6
	ATOM	1722	O	LEU B 289	66.604	13.914	1.840	1.00	20.00	8
	ATOM	1723	N	ILE B 290	67.340	15.017	0.025	1.00	20.00	7
45	ATOM	1724	CA	ILE B 290	68.597	15.390	0.658	1.00	20.00	6
	ATOM	1725	CB	ILE B 290	69.583	15.985	-0.366	1.00	20.00	6
	ATOM	1726	CG2	ILE B 290	70.778	16.609	0.359	1.00	20.00	6
	ATOM	1727	CG1	ILE B 290	70.046	14.887	-1.330	1.00	20.00	6
	ATOM	1728	CD1	ILE B 290	70.844	15.398	-2.518	1.00	20.00	6
50	ATOM	1729	C	ILE B 290	68.307	16.424	1.743	1.00	20.00	6
	ATOM	1730	O	ILE B 290	68.807	16.317	2.862	1.00	20.00	8
	ATOM	1731	N	PHE B 291	67.491	17.420	1.411	1.00	20.00	7
	ATOM	1732	CA	PHE B 291	67.143	18.462	2.372	1.00	20.00	6
	ATOM	1733	CB	PHE B 291	66.222	19.502	1.731	1.00	20.00	6
55	ATOM	1734	CG	PHE B 291	66.869	20.289	0.628	1.00	20.00	6
	ATOM	1735	CD1	PHE B 291	68.255	20.420	0.568	1.00	20.00	6
	ATOM	1736	CD2	PHE B 291	66.094	20.931	-0.332	1.00	20.00	6
	ATOM	1737	CE1	PHE B 291	68.859	21.182	-0.435	1.00	20.00	6
	ATOM	1738	CE2	PHE B 291	66.690	21.697	-1.340	1.00	20.00	6

	ATOM	1739	CZ	PHE B 291	68.074	21.822	-1.390	1.00	20.00	6
	ATOM	1740	C	PHE B 291	66.453	17.848	3.576	1.00	20.00	6
	ATOM	1741	O	PHE B 291	66.664	18.262	4.718	1.00	20.00	8
	ATOM	1742	N	GLN B 292	65.629	16.847	3.303	1.00	20.00	7
5	ATOM	1743	CA	GLN B 292	64.887	16.154	4.341	1.00	20.00	6
	ATOM	1744	CB	GLN B 292	64.006	15.090	3.687	1.00	20.00	6
	ATOM	1745	CG	GLN B 292	62.953	14.486	4.572	1.00	20.00	6
	ATOM	1746	CD	GLN B 292	61.895	13.750	3.763	1.00	20.00	6
	ATOM	1747	OE1	GLN B 292	62.208	12.835	2.997	1.00	20.00	8
10	ATOM	1748	NE2	GLN B 292	60.637	14.155	3.924	1.00	20.00	7
	ATOM	1749	C	GLN B 292	65.865	15.522	5.329	1.00	20.00	6
	ATOM	1750	O	GLN B 292	65.689	15.630	6.540	1.00	20.00	8
	ATOM	1751	N	LYS B 293	66.907	14.875	4.812	1.00	20.00	7
	ATOM	1752	CA	LYS B 293	67.898	14.244	5.683	1.00	20.00	6
15	ATOM	1753	CB	LYS B 293	68.850	13.372	4.865	1.00	20.00	6
	ATOM	1754	CG	LYS B 293	68.197	12.135	4.278	1.00	20.00	6
	ATOM	1755	CD	LYS B 293	69.217	11.260	3.554	1.00	20.00	6
	ATOM	1756	CE	LYS B 293	68.575	9.972	3.051	1.00	20.00	6
	ATOM	1757	NZ	LYS B 293	69.553	9.099	2.339	1.00	20.00	7
20	ATOM	1758	C	LYS B 293	68.698	15.287	6.468	1.00	20.00	6
	ATOM	1759	O	LYS B 293	69.044	15.074	7.634	1.00	20.00	8
	ATOM	1760	N	ILE B 294	68.989	16.411	5.827	1.00	20.00	7
	ATOM	1761	CA	ILE B 294	69.745	17.480	6.472	1.00	20.00	6
	ATOM	1762	CB	ILE B 294	70.026	18.632	5.474	1.00	20.00	6
25	ATOM	1763	CG2	ILE B 294	70.489	19.881	6.223	1.00	20.00	6
	ATOM	1764	CG1	ILE B 294	71.070	18.178	4.443	1.00	20.00	6
	ATOM	1765	CD1	ILE B 294	71.266	19.159	3.303	1.00	20.00	6
	ATOM	1766	C	ILE B 294	69.035	18.045	7.712	1.00	20.00	6
	ATOM	1767	O	ILE B 294	69.618	18.091	8.798	1.00	20.00	8
30	ATOM	1768	N	ILE B 295	67.783	18.467	7.564	1.00	20.00	7
	ATOM	1769	CA	ILE B 295	67.068	19.037	8.707	1.00	20.00	6
	ATOM	1770	CB	ILE B 295	65.710	19.647	8.300	1.00	20.00	6
	ATOM	1771	CG2	ILE B 295	65.927	20.749	7.265	1.00	20.00	6
	ATOM	1772	CG1	ILE B 295	64.784	18.559	7.762	1.00	20.00	6
35	ATOM	1773	CD1	ILE B 295	63.356	19.037	7.558	1.00	20.00	6
	ATOM	1774	C	ILE B 295	66.831	18.045	9.842	1.00	20.00	6
	ATOM	1775	O	ILE B 295	66.540	18.447	10.967	1.00	20.00	8
	ATOM	1776	N	LYS B 296	66.956	16.753	9.550	1.00	20.00	7
	ATOM	1777	CA	LYS B 296	66.765	15.724	10.569	1.00	20.00	6
40	ATOM	1778	CB	LYS B 296	65.907	14.576	10.019	1.00	20.00	6
	ATOM	1779	CG	LYS B 296	64.535	15.010	9.538	1.00	20.00	6
	ATOM	1780	CD	LYS B 296	63.739	13.851	8.951	1.00	20.00	6
	ATOM	1781	CE	LYS B 296	63.296	12.873	10.025	1.00	20.00	6
	ATOM	1782	NZ	LYS B 296	62.375	11.828	9.482	1.00	20.00	7
45	ATOM	1783	C	LYS B 296	68.116	15.176	11.018	1.00	20.00	6
	ATOM	1784	O	LYS B 296	68.178	14.261	11.838	1.00	20.00	8
	ATOM	1785	N	LEU B 297	69.190	15.746	10.474	1.00	20.00	7
	ATOM	1786	CA	LEU B 297	70.551	15.320	10.791	1.00	20.00	6
	ATOM	1787	CB	LEU B 297	70.911	15.680	12.236	1.00	20.00	6
50	ATOM	1788	CG	LEU B 297	72.398	15.538	12.585	1.00	20.00	6
	ATOM	1789	CD1	LEU B 297	73.215	16.555	11.771	1.00	20.00	6
	ATOM	1790	CD2	LEU B 297	72.605	15.762	14.076	1.00	20.00	6
	ATOM	1791	C	LEU B 297	70.635	13.810	10.592	1.00	20.00	6
	ATOM	1792	O	LEU B 297	71.150	13.080	11.434	1.00	20.00	8
55	ATOM	1793	N	GLU B 298	70.128	13.351	9.456	1.00	20.00	7
	ATOM	1794	CA	GLU B 298	70.115	11.934	9.148	1.00	20.00	6
	ATOM	1795	CB	GLU B 298	68.817	11.597	8.416	1.00	20.00	6
	ATOM	1796	CG	GLU B 298	68.568	10.123	8.233	1.00	20.00	6
	ATOM	1797	CD	GLU B 298	67.254	9.858	7.535	1.00	20.00	6

	ATOM	1798	OE1	GLU B 298	66.214	10.331	8.043	1.00	20.00	8
	ATOM	1799	OE2	GLU B 298	67.261	9.185	6.484	1.00	20.00	8
	ATOM	1800	C	GLU B 298	71.309	11.446	8.332	1.00	20.00	6
	ATOM	1801	O	GLU B 298	71.310	11.523	7.104	1.00	20.00	8
5	ATOM	1802	N	TYR B 299	72.325	10.946	9.027	1.00	20.00	7
	ATOM	1803	CA	TYR B 299	73.519	10.405	8.390	1.00	20.00	6
	ATOM	1804	CB	TYR B 299	74.444	11.521	7.880	1.00	20.00	6
	ATOM	1805	CG	TYR B 299	75.330	12.130	8.953	1.00	20.00	6
	ATOM	1806	CD1	TYR B 299	74.796	12.962	9.935	1.00	20.00	6
10	ATOM	1807	CE1	TYR B 299	75.589	13.482	10.951	1.00	20.00	6
	ATOM	1808	CD2	TYR B 299	76.692	11.833	9.013	1.00	20.00	6
	ATOM	1809	CE2	TYR B 299	77.499	12.352	10.032	1.00	20.00	6
	ATOM	1810	CZ	TYR B 299	76.935	13.173	10.995	1.00	20.00	6
	ATOM	1811	OH	TYR B 299	77.701	13.687	12.006	1.00	20.00	8
15	ATOM	1812	C	TYR B 299	74.245	9.600	9.456	1.00	20.00	6
	ATOM	1813	O	TYR B 299	73.913	9.688	10.631	1.00	20.00	8
	ATOM	1814	N	ASP B 300	75.229	8.808	9.052	1.00	20.00	7
	ATOM	1815	CA	ASP B 300	75.991	8.030	10.016	1.00	20.00	6
	ATOM	1816	CB	ASP B 300	75.291	6.700	10.304	1.00	20.00	6
20	ATOM	1817	CG	ASP B 300	74.898	5.968	9.048	1.00	20.00	6
	ATOM	1818	OD1	ASP B 300	75.806	5.594	8.274	1.00	20.00	8
	ATOM	1819	OD2	ASP B 300	73.681	5.771	8.832	1.00	20.00	8
	ATOM	1820	C	ASP B 300	77.397	7.799	9.488	1.00	20.00	6
	ATOM	1821	O	ASP B 300	77.651	7.976	8.297	1.00	20.00	8
25	ATOM	1822	N	PHE B 301	78.307	7.417	10.378	1.00	20.00	7
	ATOM	1823	CA	PHE B 301	79.695	7.186	9.996	1.00	20.00	6
	ATOM	1824	CB	PHE B 301	80.655	7.664	11.093	1.00	20.00	6
	ATOM	1825	CG	PHE B 301	80.488	9.103	11.481	1.00	20.00	6
	ATOM	1826	CD1	PHE B 301	79.493	9.487	12.370	1.00	20.00	6
30	ATOM	1827	CD2	PHE B 301	81.346	10.075	10.970	1.00	20.00	6
	ATOM	1828	CE1	PHE B 301	79.352	10.823	12.750	1.00	20.00	6
	ATOM	1829	CE2	PHE B 301	81.214	11.408	11.342	1.00	20.00	6
	ATOM	1830	CZ	PHE B 301	80.215	11.783	12.235	1.00	20.00	6
	ATOM	1831	C	PHE B 301	80.009	5.722	9.744	1.00	20.00	6
35	ATOM	1832	O	PHE B 301	79.506	4.839	10.442	1.00	20.00	8
	ATOM	1833	N	PRO B 302	80.842	5.440	8.732	1.00	20.00	7
	ATOM	1834	CD	PRO B 302	81.330	6.316	7.654	1.00	20.00	6
	ATOM	1835	CA	PRO B 302	81.191	4.044	8.466	1.00	20.00	6
	ATOM	1836	CB	PRO B 302	81.838	4.105	7.084	1.00	20.00	6
40	ATOM	1837	CG	PRO B 302	82.425	5.479	7.046	1.00	20.00	6
	ATOM	1838	C	PRO B 302	82.168	3.629	9.569	1.00	20.00	6
	ATOM	1839	O	PRO B 302	82.887	4.469	10.111	1.00	20.00	8
	ATOM	1840	N	ALA B 303	82.185	2.345	9.908	1.00	20.00	7
	ATOM	1841	CA	ALA B 303	83.052	1.836	10.968	1.00	20.00	6
45	ATOM	1842	CB	ALA B 303	82.993	0.310	10.987	1.00	20.00	6
	ATOM	1843	C	ALA B 303	84.513	2.294	10.939	1.00	20.00	6
	ATOM	1844	O	ALA B 303	85.078	2.637	11.979	1.00	20.00	8
	ATOM	1845	N	ALA B 304	85.121	2.306	9.756	1.00	20.00	7
	ATOM	1846	CA	ALA B 304	86.527	2.684	9.605	1.00	20.00	6
50	ATOM	1847	CB	ALA B 304	86.971	2.423	8.165	1.00	20.00	6
	ATOM	1848	C	ALA B 304	86.894	4.119	10.001	1.00	20.00	6
	ATOM	1849	O	ALA B 304	87.983	4.367	10.520	1.00	20.00	8
	ATOM	1850	N	PHE B 305	85.985	5.053	9.742	1.00	20.00	7
	ATOM	1851	CA	PHE B 305	86.183	6.473	10.034	1.00	20.00	6
55	ATOM	1852	CB	PHE B 305	84.822	7.115	10.312	1.00	20.00	6
	ATOM	1853	CG	PHE B 305	84.705	8.522	9.815	1.00	20.00	6
	ATOM	1854	CD1	PHE B 305	85.303	9.572	10.502	1.00	20.00	6
	ATOM	1855	CD2	PHE B 305	84.003	8.800	8.646	1.00	20.00	6
	ATOM	1856	CE1	PHE B 305	85.202	10.881	10.033	1.00	20.00	6

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     ATOM   1857  CE2  PHE B 305      83.896  10.106   8.167  1.00 20.00   6
     ATOM   1858  CZ   PHE B 305      84.496  11.147   8.862  1.00 20.00   6
     ATOM   1859  C    PHE B 305      87.153   6.789  11.182  1.00 20.00   6
     ATOM   1860  O    PHE B 305      86.964   6.342  12.312  1.00 20.00   8
  5  ATOM   1861  N    PHE B 306      88.190   7.565  10.883  1.00 20.00   7
     ATOM   1862  CA   PHE B 306      89.176   7.945  11.894  1.00 20.00   6
     ATOM   1863  CB   PHE B 306      90.179   8.936  11.295  1.00 20.00   6
     ATOM   1864  CG   PHE B 306      90.695   8.531   9.940  1.00 20.00   6
     ATOM   1865  CD1  PHE B 306      91.292   7.284   9.747  1.00 20.00   6
 10  ATOM   1866  CD2  PHE B 306      90.588   9.395   8.853  1.00 20.00   6
     ATOM   1867  CE1  PHE B 306      91.774   6.906   8.490  1.00 20.00   6
     ATOM   1868  CE2  PHE B 306      91.067   9.027   7.590  1.00 20.00   6
     ATOM   1869  CZ   PHE B 306      91.662   7.780   7.408  1.00 20.00   6
     ATOM   1870  C    PHE B 306      88.445   8.575  13.086  1.00 20.00   6
 15  ATOM   1871  O    PHE B 306      87.731   9.566  12.936  1.00 20.00   8
     ATOM   1872  N    PRO B 307      88.614   7.995  14.288  1.00 20.00   7
     ATOM   1873  CD   PRO B 307      89.482   6.834  14.555  1.00 20.00   6
     ATOM   1874  CA   PRO B 307      87.983   8.459  15.530  1.00 20.00   6
     ATOM   1875  CB   PRO B 307      88.748   7.691  16.606  1.00 20.00   6
 20  ATOM   1876  CG   PRO B 307      89.018   6.388  15.928  1.00 20.00   6
     ATOM   1877  C    PRO B 307      87.986   9.965  15.784  1.00 20.00   6
     ATOM   1878  O    PRO B 307      86.936  10.565  16.025  1.00 20.00   8
     ATOM   1879  N    LYS B 308      89.162  10.575  15.745  1.00 20.00   7
     ATOM   1880  CA   LYS B 308      89.260  12.004  15.992  1.00 20.00   6
 25  ATOM   1881  CB   LYS B 308      90.728  12.405  16.149  1.00 20.00   6
     ATOM   1882  CG   LYS B 308      91.338  11.805  17.410  1.00 20.00   6
     ATOM   1883  CD   LYS B 308      92.806  12.140  17.591  1.00 20.00   6
     ATOM   1884  CE   LYS B 308      93.339  11.457  18.847  1.00 20.00   6
     ATOM   1885  NZ   LYS B 308      94.816  11.573  18.985  1.00 20.00   7
 30  ATOM   1886  C    LYS B 308      88.572  12.808  14.894  1.00 20.00   6
     ATOM   1887  O    LYS B 308      87.985  13.855  15.167  1.00 20.00   8
     ATOM   1888  N    ALA B 309      88.629  12.318  13.669  1.00 20.00   7
     ATOM   1889  CA   ALA B 309      87.967  13.011  12.557  1.00 20.00   6
     ATOM   1890  CB   ALA B 309      88.328  12.369  11.231  1.00 20.00   6
 35  ATOM   1891  C    ALA B 309      86.460  12.936  12.787  1.00 20.00   6
     ATOM   1892  O    ALA B 309      85.735  13.903  12.552  1.00 20.00   8
     ATOM   1893  N    ARG B 310      85.986  11.780  13.246  1.00 20.00   7
     ATOM   1894  CA   ARG B 310      84.561  11.619  13.513  1.00 20.00   6
     ATOM   1895  CB   ARG B 310      84.246  10.194  13.979  1.00 20.00   6
 40  ATOM   1896  CG   ARG B 310      82.844  10.069  14.561  1.00 20.00   6
     ATOM   1897  CD   ARG B 310      82.408   8.632  14.789  1.00 20.00   6
     ATOM   1898  NE   ARG B 310      81.060   8.593  15.355  1.00 20.00   7
     ATOM   1899  CZ   ARG B 310      80.259   7.532  15.328  1.00 20.00   6
     ATOM   1900  NH1  ARG B 310      80.665   6.401  14.759  1.00 20.00   7
 45  ATOM   1901  NH2  ARG B 310      79.048   7.601  15.867  1.00 20.00   7
     ATOM   1902  C    ARG B 310      84.110  12.613  14.583  1.00 20.00   6
     ATOM   1903  O    ARG B 310      83.080  13.274  14.436  1.00 20.00   8
     ATOM   1904  N    ASP B 311      84.876  12.707  15.666  1.00 20.00   7
     ATOM   1905  CA   ASP B 311      84.535  13.629  16.740  1.00 20.00   6
 50  ATOM   1906  CB   ASP B 311      85.574  13.555  17.864  1.00 20.00   6
     ATOM   1907  CG   ASP B 311      85.260  14.505  19.006  1.00 20.00   6
     ATOM   1908  OD1  ASP B 311      85.782  15.636  19.010  1.00 20.00   8
     ATOM   1909  OD2  ASP B 311      84.480  14.124  19.901  1.00 20.00   8
     ATOM   1910  C    ASP B 311      84.445  15.054  16.198  1.00 20.00   6
 55  ATOM   1911  O    ASP B 311      83.539  15.800  16.564  1.00 20.00   8
     ATOM   1912  N    LEU B 312      85.371  15.423  15.313  1.00 20.00   7
     ATOM   1913  CA   LEU B 312      85.362  16.769  14.736  1.00 20.00   6
     ATOM   1914  CB   LEU B 312      86.604  16.999  13.869  1.00 20.00   6
     ATOM   1915  CG   LEU B 312      86.662  18.329  13.099  1.00 20.00   6
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      ATOM   1916  CD1 LEU B 312      86.424  19.510  14.037  1.00 20.00   6
      ATOM   1917  CD2 LEU B 312      88.018  18.450  12.414  1.00 20.00   6
      ATOM   1918  C   LEU B 312      84.112  17.008  13.899  1.00 20.00   6
      ATOM   1919  O   LEU B 312      83.456  18.039  14.035  1.00 20.00   8
   5  ATOM   1920  N   VAL B 313      83.786  16.051  13.033  1.00 20.00   7
      ATOM   1921  CA  VAL B 313      82.611  16.171  12.183  1.00 20.00   6
      ATOM   1922  CB  VAL B 313      82.464  14.942  11.255  1.00 20.00   6
      ATOM   1923  CG1 VAL B 313      81.121  14.973  10.551  1.00 20.00   6
      ATOM   1924  CG2 VAL B 313      83.595  14.935  10.228  1.00 20.00   6
  10  ATOM   1925  C   VAL B 313      81.354  16.315  13.036  1.00 20.00   6
      ATOM   1926  O   VAL B 313      80.467  17.111  12.716  1.00 20.00   8
      ATOM   1927  N   GLU B 314      81.282  15.559  14.129  1.00 20.00   7
      ATOM   1928  CA  GLU B 314      80.122  15.634  15.010  1.00 20.00   6
      ATOM   1929  CB  GLU B 314      80.191  14.545  16.084  1.00 20.00   6
  15  ATOM   1930  CG  GLU B 314      80.160  13.131  15.521  1.00 20.00   6
      ATOM   1931  CD  GLU B 314      80.222  12.073  16.603  1.00 20.00   6
      ATOM   1932  OE1 GLU B 314      81.033  12.227  17.542  1.00 20.00   8
      ATOM   1933  OE2 GLU B 314      79.469  11.081  16.512  1.00 20.00   8
      ATOM   1934  C   GLU B 314      80.035  17.005  15.664  1.00 20.00   6
  20  ATOM   1935  O   GLU B 314      78.960  17.443  16.059  1.00 20.00   8
      ATOM   1936  N   LYS B 315      81.165  17.690  15.776  1.00 20.00   7
      ATOM   1937  CA  LYS B 315      81.154  19.010  16.383  1.00 20.00   6
      ATOM   1938  CB  LYS B 315      82.448  19.240  17.168  1.00 20.00   6
      ATOM   1939  CG  LYS B 315      82.460  18.478  18.493  1.00 20.00   6
  25  ATOM   1940  CD  LYS B 315      83.803  18.529  19.198  1.00 20.00   6
      ATOM   1941  CE  LYS B 315      83.749  17.825  20.552  1.00 20.00   6
      ATOM   1942  NZ  LYS B 315      82.829  18.505  21.506  1.00 20.00   7
      ATOM   1943  C   LYS B 315      80.934  20.104  15.343  1.00 20.00   6
      ATOM   1944  O   LYS B 315      80.855  21.282  15.686  1.00 20.00   8
  30  ATOM   1945  N   LEU B 316      80.819  19.706  14.075  1.00 20.00   7
      ATOM   1946  CA  LEU B 316      80.577  20.649  12.979  1.00 20.00   6
      ATOM   1947  CB  LEU B 316      81.608  20.450  11.863  1.00 20.00   6
      ATOM   1948  CG  LEU B 316      83.044  20.833  12.240  1.00 20.00   6
      ATOM   1949  CD1 LEU B 316      84.011  20.365  11.156  1.00 20.00   6
  35  ATOM   1950  CD2 LEU B 316      83.124  22.351  12.434  1.00 20.00   6
      ATOM   1951  C   LEU B 316      79.164  20.469  12.415  1.00 20.00   6
      ATOM   1952  O   LEU B 316      78.464  21.448  12.148  1.00 20.00   8
      ATOM   1953  N   LEU B 317      78.746  19.220  12.230  1.00 20.00   7
      ATOM   1954  CA  LEU B 317      77.403  18.962  11.721  1.00 20.00   6
  40  ATOM   1955  CB  LEU B 317      77.343  17.605  11.012  1.00 20.00   6
      ATOM   1956  CG  LEU B 317      78.335  17.445   9.852  1.00 20.00   6
      ATOM   1957  CD1 LEU B 317      78.091  16.111   9.143  1.00 20.00   6
      ATOM   1958  CD2 LEU B 317      78.182  18.603   8.866  1.00 20.00   6
      ATOM   1959  C   LEU B 317      76.435  19.000  12.899  1.00 20.00   6
  45  ATOM   1960  O   LEU B 317      75.979  17.966  13.398  1.00 20.00   8
      ATOM   1961  N   VAL B 318      76.156  20.215  13.354  1.00 20.00   7
      ATOM   1962  CA  VAL B 318      75.251  20.451  14.467  1.00 20.00   6
      ATOM   1963  CB  VAL B 318      75.981  21.164  15.625  1.00 20.00   6
      ATOM   1964  CG1 VAL B 318      75.007  21.461  16.759  1.00 20.00   6
  50  ATOM   1965  CG2 VAL B 318      77.136  20.300  16.115  1.00 20.00   6
      ATOM   1966  C   VAL B 318      74.140  21.344  13.936  1.00 20.00   6
      ATOM   1967  O   VAL B 318      74.410  22.386  13.333  1.00 20.00   8
      ATOM   1968  N   LEU B 319      72.892  20.941  14.153  1.00 20.00   7
      ATOM   1969  CA  LEU B 319      71.758  21.717  13.663  1.00 20.00   6
  55  ATOM   1970  CB  LEU B 319      70.444  21.056  14.093  1.00 20.00   6
      ATOM   1971  CG  LEU B 319      70.211  19.647  13.533  1.00 20.00   6
      ATOM   1972  CD1 LEU B 319      68.883  19.098  14.060  1.00 20.00   6
      ATOM   1973  CD2 LEU B 319      70.211  19.688  12.000  1.00 20.00   6
      ATOM   1974  C   LEU B 319      71.794  23.173  14.119  1.00 20.00   6
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     ATOM   1975  O   LEU B 319      71.591  24.082  13.317  1.00 20.00    8
     ATOM   1976  N   ASP B 320      72.052  23.394  15.405  1.00 20.00    7
     ATOM   1977  CA  ASP B 320      72.119  24.745  15.958  1.00 20.00    6
     ATOM   1978  CB  ASP B 320      72.091  24.687  17.490  1.00 20.00    6
  5  ATOM   1979  CG  ASP B 320      72.058  26.061  18.129  1.00 20.00    6
     ATOM   1980  OD1 ASP B 320      72.506  27.036  17.492  1.00 20.00    8
     ATOM   1981  OD2 ASP B 320      71.595  26.166  19.284  1.00 20.00    8
     ATOM   1982  C   ASP B 320      73.415  25.419  15.492  1.00 20.00    6
     ATOM   1983  O   ASP B 320      74.496  25.089  15.965  1.00 20.00    8
 10  ATOM   1984  N   ALA B 321      73.294  26.372  14.576  1.00 20.00    7
     ATOM   1985  CA  ALA B 321      74.450  27.078  14.028  1.00 20.00    6
     ATOM   1986  CB  ALA B 321      73.982  28.109  13.006  1.00 20.00    6
     ATOM   1987  C   ALA B 321      75.359  27.747  15.065  1.00 20.00    6
     ATOM   1988  O   ALA B 321      76.535  27.992  14.790  1.00 20.00    8
 15  ATOM   1989  N   THR B 322      74.829  28.035  16.252  1.00 20.00    7
     ATOM   1990  CA  THR B 322      75.631  28.681  17.292  1.00 20.00    6
     ATOM   1991  CB  THR B 322      74.755  29.491  18.271  1.00 20.00    6
     ATOM   1992  OG1 THR B 322      73.879  28.605  18.973  1.00 20.00    8
     ATOM   1993  CG2 THR B 322      73.928  30.527  17.519  1.00 20.00    6
 20  ATOM   1994  C   THR B 322      76.437  27.684  18.108  1.00 20.00    6
     ATOM   1995  O   THR B 322      77.166  28.071  19.019  1.00 20.00    8
     ATOM   1996  N   LYS B 323      76.312  26.401  17.786  1.00 20.00    7
     ATOM   1997  CA  LYS B 323      77.048  25.378  18.517  1.00 20.00    6
     ATOM   1998  CB  LYS B 323      76.080  24.378  19.155  1.00 20.00    6
 25  ATOM   1999  CG  LYS B 323      75.180  24.992  20.209  1.00 20.00    6
     ATOM   2000  CD  LYS B 323      74.356  23.931  20.924  1.00 20.00    6
     ATOM   2001  CE  LYS B 323      73.406  24.574  21.927  1.00 20.00    6
     ATOM   2002  NZ  LYS B 323      74.144  25.514  22.818  1.00 20.00    7
     ATOM   2003  C   LYS B 323      78.066  24.631  17.664  1.00 20.00    6
 30  ATOM   2004  O   LYS B 323      78.520  23.557  18.040  1.00 20.00    8
     ATOM   2005  N   ARG B 324      78.427  25.195  16.517  1.00 20.00    7
     ATOM   2006  CA  ARG B 324      79.408  24.545  15.656  1.00 20.00    6
     ATOM   2007  CB  ARG B 324      79.108  24.834  14.186  1.00 20.00    6
     ATOM   2008  CG  ARG B 324      77.824  24.177  13.728  1.00 20.00    6
 35  ATOM   2009  CD  ARG B 324      77.468  24.505  12.297  1.00 20.00    6
     ATOM   2010  NE  ARG B 324      76.060  24.202  12.069  1.00 20.00    7
     ATOM   2011  CZ  ARG B 324      75.277  24.873  11.233  1.00 20.00    6
     ATOM   2012  NH1 ARG B 324      75.764  25.888  10.523  1.00 20.00    7
     ATOM   2013  NH2 ARG B 324      73.992  24.551  11.140  1.00 20.00    7
 40  ATOM   2014  C   ARG B 324      80.811  25.011  16.008  1.00 20.00    6
     ATOM   2015  O   ARG B 324      81.070  26.212  16.131  1.00 20.00    8
     ATOM   2016  N   LEU B 325      81.711  24.049  16.180  1.00 20.00    7
     ATOM   2017  CA  LEU B 325      83.090  24.350  16.520  1.00 20.00    6
     ATOM   2018  CB  LEU B 325      83.913  23.061  16.550  1.00 20.00    6
 45  ATOM   2019  CG  LEU B 325      85.274  23.123  17.241  1.00 20.00    6
     ATOM   2020  CD1 LEU B 325      85.093  23.591  18.682  1.00 20.00    6
     ATOM   2021  CD2 LEU B 325      85.922  21.741  17.209  1.00 20.00    6
     ATOM   2022  C   LEU B 325      83.656  25.310  15.481  1.00 20.00    6
     ATOM   2023  O   LEU B 325      83.649  25.015  14.282  1.00 20.00    8
 50  ATOM   2024  N   GLY B 326      84.139  26.461  15.946  1.00 20.00    7
     ATOM   2025  CA  GLY B 326      84.697  27.449  15.040  1.00 20.00    6
     ATOM   2026  C   GLY B 326      83.857  28.711  14.932  1.00 20.00    6
     ATOM   2027  O   GLY B 326      84.369  29.757  14.529  1.00 20.00    8
     ATOM   2028  N   CYS B 327      82.575  28.632  15.286  1.00 20.00    7
 55  ATOM   2029  CA  CYS B 327      81.714  29.806  15.200  1.00 20.00    6
     ATOM   2030  CB  CYS B 327      80.233  29.404  15.183  1.00 20.00    6
     ATOM   2031  SG  CYS B 327      79.534  28.915  16.774  1.00 20.00   16
     ATOM   2032  C   CYS B 327      81.976  30.772  16.353  1.00 20.00    6
     ATOM   2033  O   CYS B 327      82.565  30.410  17.371  1.00 20.00    8
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      ATOM   2034  N    GLU B 328      81.523  32.005  16.178  1.00 20.00   7
      ATOM   2035  CA   GLU B 328      81.714  33.052  17.167  1.00 20.00   6
      ATOM   2036  CB   GLU B 328      81.087  34.348  16.632  1.00 20.00   6
      ATOM   2037  CG   GLU B 328      81.734  34.772  15.300  1.00 20.00   6
   5  ATOM   2038  CD   GLU B 328      80.962  35.842  14.539  1.00 20.00   6
      ATOM   2039  OE1  GLU B 328      79.738  35.676  14.343  1.00 20.00   8
      ATOM   2040  OE2  GLU B 328      81.588  36.840  14.116  1.00 20.00   8
      ATOM   2041  C    GLU B 328      81.187  32.701  18.560  1.00 20.00   6
      ATOM   2042  O    GLU B 328      81.850  32.983  19.562  1.00 20.00   8
  10  ATOM   2043  N    GLU B 329      80.016  32.073  18.631  1.00 20.00   7
      ATOM   2044  CA   GLU B 329      79.449  31.714  19.926  1.00 20.00   6
      ATOM   2045  CB   GLU B 329      77.991  31.263  19.782  1.00 20.00   6
      ATOM   2046  CG   GLU B 329      77.028  32.355  19.315  1.00 20.00   6
      ATOM   2047  CD   GLU B 329      77.055  32.575  17.813  1.00 20.00   6
  15  ATOM   2048  OE1  GLU B 329      77.859  31.910  17.120  1.00 20.00   8
      ATOM   2049  OE2  GLU B 329      76.267  33.413  17.323  1.00 20.00   8
      ATOM   2050  C    GLU B 329      80.264  30.616  20.605  1.00 20.00   6
      ATOM   2051  O    GLU B 329      80.182  30.436  21.819  1.00 20.00   8
      ATOM   2052  N    MET B 330      81.040  29.878  19.816  1.00 20.00   7
  20  ATOM   2053  CA   MET B 330      81.880  28.813  20.354  1.00 20.00   6
      ATOM   2054  CB   MET B 330      81.872  27.600  19.419  1.00 20.00   6
      ATOM   2055  CG   MET B 330      80.552  26.822  19.436  1.00 20.00   6
      ATOM   2056  SD   MET B 330      80.117  26.254  21.104  1.00 20.00  16
      ATOM   2057  CE   MET B 330      81.265  24.895  21.311  1.00 20.00   6
  25  ATOM   2058  C    MET B 330      83.302  29.330  20.547  1.00 20.00   6
      ATOM   2059  O    MET B 330      84.236  28.564  20.754  1.00 20.00   8
      ATOM   2060  N    GLU B 331      83.443  30.647  20.471  1.00 20.00   7
      ATOM   2061  CA   GLU B 331      84.716  31.338  20.656  1.00 20.00   6
      ATOM   2062  CB   GLU B 331      85.357  30.921  21.987  1.00 20.00   6
  30  ATOM   2063  CG   GLU B 331      84.371  30.886  23.163  1.00 20.00   6
      ATOM   2064  CD   GLU B 331      83.478  32.127  23.270  1.00 20.00   6
      ATOM   2065  OE1  GLU B 331      82.483  32.064  24.021  1.00 20.00   8
      ATOM   2066  OE2  GLU B 331      83.759  33.159  22.625  1.00 20.00   8
      ATOM   2067  C    GLU B 331      85.742  31.247  19.523  1.00 20.00   6
  35  ATOM   2068  O    GLU B 331      86.952  31.264  19.761  1.00 20.00   8
      ATOM   2069  N    GLY B 332      85.257  31.137  18.292  1.00 20.00   7
      ATOM   2070  CA   GLY B 332      86.145  31.159  17.140  1.00 20.00   6
      ATOM   2071  C    GLY B 332      87.036  30.014  16.721  1.00 20.00   6
      ATOM   2072  O    GLY B 332      86.881  28.863  17.142  1.00 20.00   8
  40  ATOM   2073  N    TYR B 333      88.002  30.366  15.875  1.00 20.00   7
      ATOM   2074  CA   TYR B 333      88.939  29.413  15.307  1.00 20.00   6
      ATOM   2075  CB   TYR B 333      89.625  30.053  14.093  1.00 20.00   6
      ATOM   2076  CG   TYR B 333      88.724  30.031  12.877  1.00 20.00   6
      ATOM   2077  CD1  TYR B 333      88.774  28.966  11.974  1.00 20.00   6
  45  ATOM   2078  CE1  TYR B 333      87.872  28.869  10.919  1.00 20.00   6
      ATOM   2079  CD2  TYR B 333      87.747  31.011  12.686  1.00 20.00   6
      ATOM   2080  CE2  TYR B 333      86.831  30.923  11.624  1.00 20.00   6
      ATOM   2081  CZ   TYR B 333      86.903  29.845  10.751  1.00 20.00   6
      ATOM   2082  OH   TYR B 333      86.001  29.719   9.724  1.00 20.00   8
  50  ATOM   2083  C    TYR B 333      89.958  28.800  16.252  1.00 20.00   6
      ATOM   2084  O    TYR B 333      90.473  27.721  15.971  1.00 20.00   8
      ATOM   2085  N    GLY B 334      90.242  29.469  17.369  1.00 20.00   7
      ATOM   2086  CA   GLY B 334      91.193  28.921  18.327  1.00 20.00   6
      ATOM   2087  C    GLY B 334      90.803  27.504  18.741  1.00 20.00   6
  55  ATOM   2088  O    GLY B 334      91.577  26.564  18.558  1.00 20.00   8
      ATOM   2089  N    PRO B 335      89.603  27.320  19.309  1.00 20.00   7
      ATOM   2090  CD   PRO B 335      88.703  28.372  19.814  1.00 20.00   6
      ATOM   2091  CA   PRO B 335      89.145  25.991  19.731  1.00 20.00   6
      ATOM   2092  CB   PRO B 335      87.759  26.275  20.303  1.00 20.00   6
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      ATOM   2093  CG   PRO B 335      87.925  27.644  20.883  1.00  20.00   6
      ATOM   2094  C    PRO B 335      89.104  24.986  18.573  1.00  20.00   6
      ATOM   2095  O    PRO B 335      89.406  23.808  18.756  1.00  20.00   8
      ATOM   2096  N    LEU B 336      88.727  25.450  17.382  1.00  20.00   7
 5    ATOM   2097  CA   LEU B 336      88.666  24.567  16.219  1.00  20.00   6
      ATOM   2098  CB   LEU B 336      88.031  25.292  15.023  1.00  20.00   6
      ATOM   2099  CG   LEU B 336      88.051  24.581  13.663  1.00  20.00   6
      ATOM   2100  CD1  LEU B 336      87.486  23.177  13.787  1.00  20.00   6
      ATOM   2101  CD2  LEU B 336      87.239  25.399  12.653  1.00  20.00   6
10    ATOM   2102  C    LEU B 336      90.060  24.068  15.839  1.00  20.00   6
      ATOM   2103  O    LEU B 336      90.274  22.870  15.665  1.00  20.00   8
      ATOM   2104  N    LYS B 337      91.011  24.986  15.717  1.00  20.00   7
      ATOM   2105  CA   LYS B 337      92.370  24.597  15.360  1.00  20.00   6
      ATOM   2106  CB   LYS B 337      93.198  25.848  15.046  1.00  20.00   6
15    ATOM   2107  CG   LYS B 337      92.678  26.560  13.801  1.00  20.00   6
      ATOM   2108  CD   LYS B 337      93.111  28.014  13.717  1.00  20.00   6
      ATOM   2109  CE   LYS B 337      94.561  28.167  13.314  1.00  20.00   6
      ATOM   2110  NZ   LYS B 337      94.882  29.611  13.122  1.00  20.00   7
      ATOM   2111  C    LYS B 337      93.020  23.764  16.467  1.00  20.00   6
20    ATOM   2112  O    LYS B 337      93.965  23.015  16.215  1.00  20.00   8
      ATOM   2113  N    ALA B 338      92.495  23.866  17.684  1.00  20.00   7
      ATOM   2114  CA   ALA B 338      93.056  23.105  18.799  1.00  20.00   6
      ATOM   2115  CB   ALA B 338      92.873  23.877  20.105  1.00  20.00   6
      ATOM   2116  C    ALA B 338      92.441  21.718  18.929  1.00  20.00   6
25    ATOM   2117  O    ALA B 338      92.805  20.955  19.820  1.00  20.00   8
      ATOM   2118  N    HIS B 339      91.513  21.375  18.043  1.00  20.00   7
      ATOM   2119  CA   HIS B 339      90.886  20.061  18.129  1.00  20.00   6
      ATOM   2120  CB   HIS B 339      89.786  19.919  17.074  1.00  20.00   6
      ATOM   2121  CG   HIS B 339      88.999  18.654  17.199  1.00  20.00   6
30    ATOM   2122  CD2  HIS B 339      87.797  18.406  17.774  1.00  20.00   6
      ATOM   2123  ND1  HIS B 339      89.462  17.440  16.737  1.00  20.00   7
      ATOM   2124  CE1  HIS B 339      88.578  16.498  17.021  1.00  20.00   6
      ATOM   2125  NE2  HIS B 339      87.559  17.057  17.650  1.00  20.00   7
      ATOM   2126  C    HIS B 339      91.928  18.952  17.970  1.00  20.00   6
35    ATOM   2127  O    HIS B 339      92.863  19.077  17.186  1.00  20.00   8
      ATOM   2128  N    PRO B 340      91.780  17.854  18.731  1.00  20.00   7
      ATOM   2129  CD   PRO B 340      90.747  17.655  19.765  1.00  20.00   6
      ATOM   2130  CA   PRO B 340      92.700  16.711  18.694  1.00  20.00   6
      ATOM   2131  CB   PRO B 340      91.966  15.665  19.521  1.00  20.00   6
40    ATOM   2132  CG   PRO B 340      91.310  16.505  20.579  1.00  20.00   6
      ATOM   2133  C    PRO B 340      93.072  16.198  17.301  1.00  20.00   6
      ATOM   2134  O    PRO B 340      94.193  15.748  17.080  1.00  20.00   8
      ATOM   2135  N    PHE B 341      92.139  16.270  16.362  1.00  20.00   7
      ATOM   2136  CA   PHE B 341      92.407  15.797  15.011  1.00  20.00   6
45    ATOM   2137  CB   PHE B 341      91.152  15.943  14.142  1.00  20.00   6
      ATOM   2138  CG   PHE B 341      91.317  15.424  12.738  1.00  20.00   6
      ATOM   2139  CD1  PHE B 341      91.596  14.080  12.507  1.00  20.00   6
      ATOM   2140  CD2  PHE B 341      91.182  16.277  11.647  1.00  20.00   6
      ATOM   2141  CE1  PHE B 341      91.738  13.592  11.207  1.00  20.00   6
50    ATOM   2142  CE2  PHE B 341      91.320  15.803  10.345  1.00  20.00   6
      ATOM   2143  CZ   PHE B 341      91.599  14.457  10.123  1.00  20.00   6
      ATOM   2144  C    PHE B 341      93.571  16.550  14.362  1.00  20.00   6
      ATOM   2145  O    PHE B 341      94.268  16.002  13.514  1.00  20.00   8
      ATOM   2146  N    PHE B 342      93.777  17.800  14.765  1.00  20.00   7
55    ATOM   2147  CA   PHE B 342      94.842  18.630  14.202  1.00  20.00   6
      ATOM   2148  CB   PHE B 342      94.336  20.058  13.975  1.00  20.00   6
      ATOM   2149  CG   PHE B 342      93.124  20.152  13.096  1.00  20.00   6
      ATOM   2150  CD1  PHE B 342      93.166  19.729  11.777  1.00  20.00   6
      ATOM   2151  CD2  PHE B 342      91.954  20.734  13.575  1.00  20.00   6
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      ATOM   2152   CE1  PHE B 342      92.058  19.888  10.936  1.00 20.00   6
      ATOM   2153   CE2  PHE B 342      90.843  20.898  12.742  1.00 20.00   6
      ATOM   2154   CZ   PHE B 342      90.898  20.475  11.423  1.00 20.00   6
      ATOM   2155   C    PHE B 342      96.077  18.718  15.101  1.00 20.00   6
  5   ATOM   2156   O    PHE B 342      96.932  19.584  14.902  1.00 20.00   8
      ATOM   2157   N    GLU B 343      96.173  17.829  16.083  1.00 20.00   7
      ATOM   2158   CA   GLU B 343      97.293  17.857  17.022  1.00 20.00   6
      ATOM   2159   CB   GLU B 343      97.330  16.564  17.841  1.00 20.00   6
      ATOM   2160   CG   GLU B 343      98.475  16.525  18.839  1.00 20.00   6
 10   ATOM   2161   CD   GLU B 343      98.732  15.365  19.813  1.00 20.00   6
      ATOM   2162   OE1  GLU B 343      98.290  14.201  19.359  1.00 20.00   8
      ATOM   2163   OE2  GLU B 343      98.379  15.622  21.036  1.00 20.00   8
      ATOM   2164   C    GLU B 343      98.683  18.113  16.430  1.00 20.00   6
      ATOM   2165   O    GLU B 343      99.419  18.969  16.925  1.00 20.00   8
 15   ATOM   2166   N    SER B 344      99.047  17.382  15.383  1.00 20.00   7
      ATOM   2167   CA   SER B 344     100.370  17.549  14.781  1.00 20.00   6
      ATOM   2168   CB   SER B 344     100.848  16.219  14.192  1.00 20.00   6
      ATOM   2169   OG   SER B 344     100.072  15.856  13.065  1.00 20.00   8
      ATOM   2170   C    SER B 344     100.467  18.629  13.702  1.00 20.00   6
 20   ATOM   2171   O    SER B 344     101.485  18.732  13.025  1.00 20.00   8
      ATOM   2172   N    VAL B 345      99.423  19.435  13.544  1.00 20.00   7
      ATOM   2173   CA   VAL B 345      99.430  20.486  12.527  1.00 20.00   6
      ATOM   2174   CB   VAL B 345      97.985  20.843  12.075  1.00 20.00   6
      ATOM   2175   CG1  VAL B 345      98.015  22.042  11.120  1.00 20.00   6
 25   ATOM   2176   CG2  VAL B 345      97.335  19.646  11.400  1.00 20.00   6
      ATOM   2177   C    VAL B 345     100.096  21.785  12.980  1.00 20.00   6
      ATOM   2178   O    VAL B 345      99.844  22.275  14.085  1.00 20.00   8
      ATOM   2179   N    THR B 346     100.951  22.335  12.122  1.00 20.00   7
      ATOM   2180   CA   THR B 346     101.602  23.610  12.397  1.00 20.00   6
 30   ATOM   2181   CB   THR B 346     103.096  23.593  11.982  1.00 20.00   6
      ATOM   2182   OG1  THR B 346     103.816  22.688  12.831  1.00 20.00   8
      ATOM   2183   CG2  THR B 346     103.707  24.983  12.115  1.00 20.00   6
      ATOM   2184   C    THR B 346     100.810  24.573  11.510  1.00 20.00   6
      ATOM   2185   O    THR B 346     100.950  24.565  10.285  1.00 20.00   8
 35   ATOM   2186   N    TRP B 347      99.966  25.385  12.138  1.00 20.00   7
      ATOM   2187   CA   TRP B 347      99.089  26.306  11.425  1.00 20.00   6
      ATOM   2188   CB   TRP B 347      97.941  26.727  12.344  1.00 20.00   6
      ATOM   2189   CG   TRP B 347      97.088  25.594  12.818  1.00 20.00   6
      ATOM   2190   CD2  TRP B 347      95.924  25.071  12.165  1.00 20.00   6
 40   ATOM   2191   CE2  TRP B 347      95.436  24.008  12.963  1.00 20.00   6
      ATOM   2192   CE3  TRP B 347      95.247  25.397  10.983  1.00 20.00   6
      ATOM   2193   CD1  TRP B 347      97.259  24.848  13.953  1.00 20.00   6
      ATOM   2194   NE1  TRP B 347      96.269  23.893  14.048  1.00 20.00   7
      ATOM   2195   CZ2  TRP B 347      94.300  23.270  12.616  1.00 20.00   6
 45   ATOM   2196   CZ3  TRP B 347      94.113  24.661  10.636  1.00 20.00   6
      ATOM   2197   CH2  TRP B 347      93.654  23.610  11.452  1.00 20.00   6
      ATOM   2198   C    TRP B 347      99.679  27.563  10.800  1.00 20.00   6
      ATOM   2199   O    TRP B 347      99.101  28.114   9.867  1.00 20.00   8
      ATOM   2200   N    ALA B 348     100.820  28.016  11.308  1.00 20.00   7
 50   ATOM   2201   CA   ALA B 348     101.439  29.247  10.822  1.00 20.00   6
      ATOM   2202   CB   ALA B 348     102.582  29.656  11.761  1.00 20.00   6
      ATOM   2203   C    ALA B 348     101.933  29.277   9.381  1.00 20.00   6
      ATOM   2204   O    ALA B 348     101.874  30.323   8.738  1.00 20.00   8
      ATOM   2205   N    ASN B 349     102.411  28.152   8.860  1.00 20.00   7
 55   ATOM   2206   CA   ASN B 349     102.940  28.153   7.500  1.00 20.00   6
      ATOM   2207   CB   ASN B 349     104.466  28.205   7.569  1.00 20.00   6
      ATOM   2208   CG   ASN B 349     105.058  26.929   8.138  1.00 20.00   6
      ATOM   2209   OD1  ASN B 349     104.445  26.282   8.984  1.00 20.00   8
      ATOM   2210   ND2  ASN B 349     106.251  26.563   7.678  1.00 20.00   7
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	ATOM	2211	C	ASN B 349	102.522	26.966	6.634	1.00	20.00	6
	ATOM	2212	O	ASN B 349	103.353	26.371	5.944	1.00	20.00	8
	ATOM	2213	N	LEU B 350	101.242	26.628	6.643	1.00	20.00	7
	ATOM	2214	CA	LEU B 350	100.776	25.500	5.846	1.00	20.00	6
5	ATOM	2215	CB	LEU B 350	99.257	25.355	5.973	1.00	20.00	6
	ATOM	2216	CG	LEU B 350	98.734	24.848	7.316	1.00	20.00	6
	ATOM	2217	CD1	LEU B 350	97.244	25.127	7.418	1.00	20.00	6
	ATOM	2218	CD2	LEU B 350	99.030	23.357	7.444	1.00	20.00	6
	ATOM	2219	C	LEU B 350	101.147	25.574	4.365	1.00	20.00	6
10	ATOM	2220	O	LEU B 350	101.557	24.575	3.775	1.00	20.00	8
	ATOM	2221	N	HIS B 351	101.006	26.744	3.752	1.00	20.00	7
	ATOM	2222	CA	HIS B 351	101.305	26.829	2.329	1.00	20.00	6
	ATOM	2223	CB	HIS B 351	100.651	28.087	1.721	1.00	20.00	6
	ATOM	2224	CG	HIS B 351	101.553	29.274	1.618	1.00	20.00	6
15	ATOM	2225	CD2	HIS B 351	102.001	30.143	2.556	1.00	20.00	6
	ATOM	2226	ND1	HIS B 351	102.072	29.706	0.416	1.00	20.00	7
	ATOM	2227	CE1	HIS B 351	102.798	30.792	0.618	1.00	20.00	6
	ATOM	2228	NE2	HIS B 351	102.772	31.079	1.907	1.00	20.00	7
	ATOM	2229	C	HIS B 351	102.797	26.731	1.999	1.00	20.00	6
20	ATOM	2230	O	HIS B 351	103.176	26.669	0.832	1.00	20.00	8
	ATOM	2231	N	GLN B 352	103.634	26.685	3.033	1.00	20.00	7
	ATOM	2232	CA	GLN B 352	105.081	26.554	2.851	1.00	20.00	6
	ATOM	2233	CB	GLN B 352	105.841	27.458	3.819	1.00	20.00	6
	ATOM	2234	CG	GLN B 352	106.395	28.705	3.166	1.00	20.00	6
25	ATOM	2235	CD	GLN B 352	105.930	29.966	3.854	1.00	20.00	6
	ATOM	2236	OE1	GLN B 352	106.134	30.139	5.053	1.00	20.00	8
	ATOM	2237	NE2	GLN B 352	105.299	30.854	3.096	1.00	20.00	7
	ATOM	2238	C	GLN B 352	105.478	25.099	3.088	1.00	20.00	6
	ATOM	2239	O	GLN B 352	106.632	24.715	2.895	1.00	20.00	8
30	ATOM	2240	N	GLN B 353	104.514	24.295	3.522	1.00	20.00	7
	ATOM	2241	CA	GLN B 353	104.761	22.888	3.777	1.00	20.00	6
	ATOM	2242	CB	GLN B 353	103.849	22.395	4.900	1.00	20.00	6
	ATOM	2243	CG	GLN B 353	104.122	23.050	6.240	1.00	20.00	6
	ATOM	2244	CD	GLN B 353	103.075	22.711	7.281	1.00	20.00	6
35	ATOM	2245	OE1	GLN B 353	102.627	21.571	7.377	1.00	20.00	8
	ATOM	2246	NE2	GLN B 353	102.690	23.700	8.076	1.00	20.00	7
	ATOM	2247	C	GLN B 353	104.507	22.079	2.510	1.00	20.00	6
	ATOM	2248	O	GLN B 353	103.732	22.490	1.641	1.00	20.00	8
	ATOM	2249	N	THR B 354	105.172	20.937	2.401	1.00	20.00	7
40	ATOM	2250	CA	THR B 354	104.998	20.071	1.244	1.00	20.00	6
	ATOM	2251	CB	THR B 354	106.240	19.173	1.029	1.00	20.00	6
	ATOM	2252	OG1	THR B 354	107.390	19.999	0.790	1.00	20.00	8
	ATOM	2253	CG2	THR B 354	106.033	18.243	-0.166	1.00	20.00	6
	ATOM	2254	C	THR B 354	103.777	19.197	1.501	1.00	20.00	6
45	ATOM	2255	O	THR B 354	103.745	18.426	2.454	1.00	20.00	8
	ATOM	2256	N	PRO B 355	102.741	19.319	0.658	1.00	20.00	7
	ATOM	2257	CD	PRO B 355	102.547	20.275	-0.444	1.00	20.00	6
	ATOM	2258	CA	PRO B 355	101.540	18.505	0.859	1.00	20.00	6
	ATOM	2259	CB	PRO B 355	100.616	18.967	-0.266	1.00	20.00	6
50	ATOM	2260	CG	PRO B 355	101.039	20.387	-0.490	1.00	20.00	6
	ATOM	2261	C	PRO B 355	101.835	17.011	0.766	1.00	20.00	6
	ATOM	2262	O	PRO B 355	102.631	16.577	-0.065	1.00	20.00	8
	ATOM	2263	N	PRO B 356	101.198	16.204	1.625	1.00	20.00	7
	ATOM	2264	CD	PRO B 356	100.128	16.522	2.587	1.00	20.00	6
55	ATOM	2265	CA	PRO B 356	101.438	14.761	1.573	1.00	20.00	6
	ATOM	2266	CB	PRO B 356	100.593	14.235	2.729	1.00	20.00	6
	ATOM	2267	CG	PRO B 356	99.429	15.188	2.737	1.00	20.00	6
	ATOM	2268	C	PRO B 356	100.960	14.244	0.222	1.00	20.00	6
	ATOM	2269	O	PRO B 356	100.005	14.779	-0.346	1.00	20.00	8

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      ATOM   2270  N   ALA B 357      101.629  13.221  -0.300  1.00 20.00   7
      ATOM   2271  CA  ALA B 357      101.247  12.660  -1.588  1.00 20.00   6
      ATOM   2272  CB  ALA B 357      102.352  11.750  -2.118  1.00 20.00   6
      ATOM   2273  C   ALA B 357       99.948  11.883  -1.427  1.00 20.00   6
  5   ATOM   2274  O   ALA B 357       99.808  11.074  -0.506  1.00 20.00   8
      ATOM   2275  N   LEU B 358       99.000  12.134  -2.323  1.00 20.00   7
      ATOM   2276  CA  LEU B 358       97.709  11.460  -2.278  1.00 20.00   6
      ATOM   2277  CB  LEU B 358       96.729  12.166  -3.217  1.00 20.00   6
      ATOM   2278  CG  LEU B 358       96.368  13.582  -2.766  1.00 20.00   6
 10   ATOM   2279  CD1 LEU B 358       95.513  14.262  -3.813  1.00 20.00   6
      ATOM   2280  CD2 LEU B 358       95.636  13.516  -1.430  1.00 20.00   6
      ATOM   2281  C   LEU B 358       97.813   9.976  -2.633  1.00 20.00   6
      ATOM   2282  O   LEU B 358       97.918   9.614  -3.806  1.00 20.00   8
      ATOM   2283  N   THR B 359       97.776   9.134  -1.600  1.00 20.00   7
 15   ATOM   2284  CA  THR B 359       97.867   7.678  -1.735  1.00 20.00   6
      ATOM   2285  CB  THR B 359       96.513   7.046  -2.149  1.00 20.00   6
      ATOM   2286  OG1 THR B 359       96.111   7.555  -3.427  1.00 20.00   8
      ATOM   2287  CG2 THR B 359       95.439   7.355  -1.112  1.00 20.00   6
      ATOM   2288  C   THR B 359       98.933   7.238  -2.736  1.00 20.00   6
 20   ATOM   2289  O   THR B 359       99.903   7.998  -2.945  1.00 20.00   8
      ATOM   2290  OXT THR B 359       98.802   6.121  -3.280  1.00 20.00   8
      TER
      ATOM   2291  OH2 TIP S   1       42.566  19.118  34.302  1.00 15.09     S
      ATOM   2292  OH2 TIP S   2       41.052  32.378  19.857  1.00 15.82     S
 25   ATOM   2293  OH2 TIP S   3       37.014  33.030  17.747  1.00 16.95     S
      ATOM   2294  OH2 TIP S   5       45.353  24.370  18.152  1.00 16.85     S
      ATOM   2295  OH2 TIP S   6       31.896  13.930  33.235  1.00 20.42     S
      ATOM   2296  OH2 TIP S   7       50.351  22.781  28.249  1.00 21.14     S
      ATOM   2297  OH2 TIP S   8       45.246  -0.589  -0.734  1.00 17.74     S
 30   ATOM   2298  OH2 TIP S  11       46.249  -0.348  -8.523  1.00 21.32     S
      ATOM   2299  OH2 TIP S  14       45.756  11.148  29.680  1.00 21.94     S
      ATOM   2300  OH2 TIP S  16       44.273  13.157  34.592  1.00 15.61     S
      ATOM   2301  OH2 TIP S  17       53.598   3.722  -1.720  1.00 21.45     S
      ATOM   2302  OH2 TIP S  18       46.049  13.087  31.565  1.00 20.35     S
 35   ATOM   2303  OH2 TIP S  19       53.422  22.401  -3.280  1.00 23.26     S
      ATOM   2304  OH2 TIP S  20       34.587   7.922   5.383  1.00 22.58     S
      ATOM   2305  OH2 TIP S  21       45.053  27.379  19.376  1.00 29.60     S
      ATOM   2306  OH2 TIP S  23       28.899  36.416  28.633  1.00 31.68     S
      ATOM   2307  OH2 TIP S  24       35.531  11.645  -8.219  1.00 23.45     S
 40   ATOM   2308  OH2 TIP S  25       47.364  28.787  19.612  1.00 23.03     S
      ATOM   2309  OH2 TIP S  27       48.859  21.588  12.634  1.00 23.76     S
      ATOM   2310  OH2 TIP S  29       48.805   8.920  23.626  1.00 22.23     S
      ATOM   2311  OH2 TIP S  31       48.619   7.247  10.112  1.00 21.32     S
      ATOM   2312  OH2 TIP S  34       44.824  28.720  15.621  1.00 25.27     S
 45   ATOM   2313  OH2 TIP S  35       26.030  12.634  13.407  1.00 21.61     S
      ATOM   2314  OH2 TIP S  36       50.462  19.810  40.066  1.00 25.45     S
      ATOM   2315  OH2 TIP S  37       39.631  23.510  -0.239  1.00 30.88     S
      ATOM   2316  OH2 TIP S  40       44.734  42.655  10.346  1.00 30.84     S
      ATOM   2317  OH2 TIP S  41       54.653   3.902   1.503  1.00 27.14     S
 50   ATOM   2318  OH2 TIP S  45       45.693  21.923  39.754  1.00 28.30     S
      ATOM   2319  OH2 TIP S  47       47.820  16.413   7.805  1.00 25.73     S
      ATOM   2320  OH2 TIP S  48       50.292  31.412  29.642  1.00 32.79     S
      ATOM   2321  OH2 TIP S  49       26.056  16.646  34.827  1.00 29.80     S
      ATOM   2322  OH2 TIP S  52       31.714  10.996  31.855  1.00 29.15     S
 55   ATOM   2323  OH2 TIP S  53       46.108  23.843  -4.299  1.00 24.21     S
      ATOM   2324  OH2 TIP S  54       37.645  11.206  34.448  1.00 28.56     S
      ATOM   2325  OH2 TIP S  55       26.371  28.513  12.142  1.00 32.08     S
      ATOM   2326  OH2 TIP S  58       33.564  19.700   3.483  1.00 28.28     S
      ATOM   2327  OH2 TIP S  64       48.295  -0.632  14.280  1.00 32.13     S
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      ATOM   2328  OH2 TIP S   65      40.064  26.036  34.324  1.00 24.17      S
      ATOM   2329  OH2 TIP S   66      29.570   3.958  14.729  1.00 28.94      S
      ATOM   2330  OH2 TIP S   72      60.085  11.604   6.814  1.00 38.35      S
      ATOM   2331  OH2 TIP S   73      39.203  44.403  18.686  1.00 26.61      S
 5    ATOM   2332  OH2 TIP S   76      47.312  12.366  27.366  1.00 28.51      S
      ATOM   2333  OH2 TIP S   80      43.862  33.771  33.329  1.00 28.82      S
      ATOM   2334  OH2 TIP S   81      57.890  13.106   2.128  1.00 40.62      S
      ATOM   2335  OH2 TIP S   82      41.663  34.381  32.043  1.00 19.35      S
      ATOM   2336  OH2 TIP S   85      50.974  40.331  19.200  1.00 21.14      S
10    ATOM   2337  OH2 TIP S   88      47.925  -0.832  -6.556  1.00 24.11      S
      ATOM   2338  OH2 TIP S   90      27.231  28.336  33.481  1.00 27.64      S
      ATOM   2339  OH2 TIP S   91      43.651  -7.101  -7.995  1.00 24.33      S
      ATOM   2340  OH2 TIP S   92      49.325   4.387  19.370  1.00 28.02      S
      ATOM   2341  OH2 TIP S   93      46.231  11.549  33.898  1.00 29.40      S
15    ATOM   2342  OH2 TIP S   94      63.889  24.831   1.168  1.00 26.53      S
      ATOM   2343  OH2 TIP S   96      56.396   4.952  -6.749  1.00 28.00      S
      ATOM   2344  OH2 TIP S   98      35.510  27.986  11.558  1.00 29.24      S
      ATOM   2345  OH2 TIP S  100      49.942  24.366  30.265  1.00 31.61      S
      ATOM   2346  OH2 TIP S  101      56.121   7.113  -8.298  1.00 31.57      S
20    ATOM   2347  OH2 TIP S  102      58.318  19.957  -8.378  1.00 26.95      S
      ATOM   2348  OH2 TIP S  103      49.647  22.446  39.624  1.00 40.57      S
      ATOM   2349  OH2 TIP S  104      45.359   7.052  13.052  1.00 26.27      S
      ATOM   2350  OH2 TIP S  105      37.150  32.340  32.346  1.00 34.45      S
      ATOM   2351  OH2 TIP S  107      43.465  40.457   8.240  1.00 40.48      S
25    ATOM   2352  OH2 TIP S  119      36.644   8.257  13.418  1.00 30.70      S
      ATOM   2353  OH2 TIP S  123      41.912  -8.974  -8.264  1.00 26.08      S
      ATOM   2354  OH2 TIP S  124      62.424  15.800  -7.411  1.00 24.08      S
      ATOM   2355  OH2 TIP S  126      37.266  18.656  -9.097  1.00 28.99      S
      ATOM   2356  OH2 TIP S  127      43.129  26.845  14.606  1.00 25.19      S
30    ATOM   2357  OH2 TIP S  128      36.339  32.639  29.802  1.00 29.25      S
      ATOM   2358  OH2 TIP S  130      54.051  14.561  26.498  1.00 33.93      S
      ATOM   2359  OH2 TIP S  131      41.805  -4.242   5.492  1.00 33.72      S
      ATOM   2360  OH2 TIP S  133      38.873  25.163  36.697  1.00 30.69      S
      ATOM   2361  OH2 TIP S  134      28.777   8.553  25.307  1.00 31.43      S
35    ATOM   2362  OH2 TIP S  135      53.672  10.546 -12.803  1.00 33.45      S
      ATOM   2363  OH2 TIP S  136      59.892  15.434  11.467  1.00 31.39      S
      ATOM   2364  OH2 TIP S  137      31.040  12.361  35.470  1.00 34.07      S
      ATOM   2365  OH2 TIP S  139      33.489  14.292  -0.598  1.00 40.68      S
      ATOM   2366  OH2 TIP S  140      46.918   8.748  11.662  1.00 29.23      S
40    ATOM   2367  OH2 TIP S  141      46.297  -7.287  -9.196  1.00 42.20      S
      ATOM   2368  OH2 TIP S  142      58.193   6.715  -4.685  1.00 35.48      S
      ATOM   2369  OH2 TIP S  143      44.598   4.435  12.503  1.00 27.68      S
      ATOM   2370  OH2 TIP S  144      27.003   5.999  12.450  1.00 36.30      S
      ATOM   2371  OH2 TIP S  145      43.676  32.852  35.735  1.00 35.70      S
45    ATOM   2372  OH2 TIP S  146      35.783  18.628  36.452  1.00 34.62      S
      ATOM   2373  OH2 TIP S  147      25.402   4.058  20.638  1.00 45.03      S
      ATOM   2374  OH2 TIP S  148      45.839  35.853  33.724  1.00 35.47      S
      ATOM   2375  OH2 TIP S  149      22.176  18.976  16.752  1.00 31.87      S
      ATOM   2376  OH2 TIP S  150      43.986  33.179  10.162  1.00 37.70      S
50    ATOM   2377  OH2 TIP S  151      50.653  20.347  42.428  1.00 35.80      S
      ATOM   2378  OH2 TIP S  152      47.843  24.314   9.506  1.00 31.05      S
      ATOM   2379  OH2 TIP S  153      44.693   5.273 -14.175  1.00 29.90      S
      ATOM   2380  OH2 TIP S  155      26.560  36.851  31.684  1.00 49.29      S
      ATOM   2381  OH2 TIP S  156      46.867   8.019 -12.951  1.00 29.21      S
55    ATOM   2382  OH2 TIP S  157      30.432  28.741  12.438  1.00 37.76      S
      ATOM   2383  OH2 TIP S  158      41.004  20.553   6.423  1.00 39.53      S
      ATOM   2384  OH2 TIP S  159      49.258  20.069  29.294  1.00 33.97      S
      ATOM   2385  OH2 TIP S  160      48.082  28.459  16.489  1.00 33.10      S
      ATOM   2386  OH2 TIP S  161      47.448  18.625  27.683  1.00 34.87      S
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     ATOM   2387  OH2 TIP S 162      19.687  20.632  23.411  1.00 35.01        S
     ATOM   2388  OH2 TIP S 163      32.402  -1.266  22.443  1.00 37.26        S
     ATOM   2389  OH2 TIP S 164      39.475  33.468  33.237  1.00 35.34        S
     ATOM   2390  OH2 TIP S 165      44.277  18.950   5.162  1.00 45.14        S
  5  ATOM   2391  OH2 TIP S 166      34.797  30.523  10.736  1.00 47.55        S
     ATOM   2392  OH2 TIP S 167      46.541   3.526 -14.949  1.00 26.54        S
     ATOM   2393  OH2 TIP S 168      36.333  16.371   1.539  1.00 38.68        S
     ATOM   2394  OH2 TIP S 169      46.761  38.936  27.403  1.00 34.66        S
     ATOM   2395  OH2 TIP S 170      24.163  13.264  11.375  1.00 41.23        S
 10  ATOM   2396  OH2 TIP S 171      48.459  15.018  31.951  1.00 38.11        S
     ATOM   2397  OH2 TIP S 172      34.261  23.193  40.004  1.00 48.96        S
     ATOM   2398  OH2 TIP S 173      45.924  -0.026  13.224  1.00 39.55        S
     ATOM   2399  OH2 TIP S 175      41.384  37.389  32.543  1.00 40.74        S
     ATOM   2400  OH2 TIP S 177      49.394  35.312  27.150  1.00 44.33        S
 15  ATOM   2401  OH2 TIP S 178      29.066  29.942  34.359  1.00 41.46        S
     ATOM   2402  OH2 TIP S 180      49.354  19.467   7.273  1.00 34.56        S
     ATOM   2403  OH2 TIP S 181      25.298  17.029  31.863  1.00 47.74        S
     ATOM   2404  OH2 TIP S 182      37.071  25.027   4.669  1.00 43.87        S
     ATOM   2405  OH2 TIP S 183      22.581   7.487  18.691  1.00 41.75        S
 20  ATOM   2406  OH2 TIP S 184      32.269   7.011  -1.891  1.00 48.84        S
     ATOM   2407  OH2 TIP S 185      48.234   0.494   6.833  1.00 48.16        S
     ATOM   2408  OH2 TIP S 187      20.008  14.658  19.211  1.00 45.27        S
     ATOM   2409  OH2 TIP S 188      49.341  22.698  42.272  1.00 42.20        S
     ATOM   2410  OH2 TIP S 190      61.292  18.260  -8.097  1.00 45.21        S
 25  ATOM   2411  OH2 TIP S 191      28.152  10.606   2.819  1.00 40.38        S
     ATOM   2412  OH2 TIP S 192      25.626  12.619  23.191  1.00 34.27        S
     ATOM   2413  OH2 TIP S 193      59.876  11.603   1.216  1.00 46.54        S
     ATOM   2414  OH2 TIP S 194      57.592  21.183 -10.646  1.00 45.82        S
     ATOM   2415  OH2 TIP S 195      31.509  36.649  21.499  1.00 38.73        S
 30  ATOM   2416  OH2 TIP S 197      50.270  -1.543  -6.136  1.00 42.66        S
     ATOM   2417  OH2 TIP S 198      24.467   8.729  13.088  1.00 42.78        S
     ATOM   2418  OH2 TIP S 199      38.098   8.699  25.759  1.00 32.80        S
     ATOM   2419  OH2 TIP S 200      57.831  11.358 -13.255  1.00 45.31        S
     ATOM   2420  OH2 TIP S 201      23.888  22.328  30.524  1.00 37.12        S
 35  ATOM   2421  OH2 TIP S 202      47.691  26.068  37.666  1.00 37.92        S
     ATOM   2422  OH2 TIP S 203      38.653   7.070  29.307  1.00 50.54        S
     ATOM   2423  OH2 TIP S 206      44.424  27.583   2.092  1.00 53.50        S
     ATOM   2424  OH2 TIP S 212      22.258   2.296  17.948  1.00 47.38        S
     ATOM   2425  OH2 TIP S 214      19.843  17.943  23.303  1.00 30.36        S
 40  ATOM   2426  OH2 TIP S 216      27.647  11.344  24.681  1.00 31.32        S
     ATOM   2427  OH2 TIP S 217      37.953   7.817  -9.284  1.00 45.97        S
     ATOM   2428  OH2 TIP S 218      33.845  34.040  12.124  1.00 38.11        S
     ATOM   2429  OH2 TIP S 219      58.484  15.269  13.717  1.00 38.26        S
     ATOM   2430  OH2 TIP S 220      48.526  40.920  26.583  1.00 35.23        S
 45  ATOM   2431  OH2 TIP S 222      52.094  21.184  38.122  1.00 29.86        S
     ATOM   2432  OH2 TIP S 223      36.889   5.881   3.281  1.00 37.63        S
     ATOM   2433  OH2 TIP S 224      47.642  -1.401 -10.684  1.00 34.89        S
     ATOM   2434  OH2 TIP S 226      47.284   2.916  19.133  1.00 34.10        S
     ATOM   2435  OH2 TIP S 227      42.468   4.463 -15.039  1.00 37.98        S
 50  ATOM   2436  OH2 TIP S 228      19.169  22.832  21.831  1.00 41.57        S
     ATOM   2437  OH2 TIP S 231      57.592  12.689  14.880  1.00 50.22        S
     ATOM   2438  OH2 TIP S 232      27.102   9.176   5.655  1.00 40.57        S
     ATOM   2439  OH2 TIP S 233      58.618   9.072 -11.925  1.00 50.71        S
     ATOM   2440  OH2 TIP S 234      22.822  25.342  19.945  1.00 34.93        S
 55  ATOM   2441  OH2 TIP S 236      24.831  32.218  28.901  1.00 37.69        S
     ATOM   2442  OH2 TIP S 237      20.045  10.774  16.992  1.00 39.57        S
     ATOM   2443  OH2 TIP S 238      58.019  19.850  15.679  1.00 41.42        S
     ATOM   2444  OH2 TIP S 239      19.490  20.949  26.114  1.00 34.55        S
     ATOM   2445  OH2 TIP S 240      61.187  26.377   7.346  1.00 39.68        S
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     ATOM   2446   OH2 TIP S 241    33.680  38.342  19.389  1.00 48.93      S
     ATOM   2447   OH2 TIP S 242    51.539  31.612  10.881  1.00 55.65      S
     ATOM   2448   OH2 TIP S 244    25.872  14.431  30.404  1.00 46.69      S
     ATOM   2449   OH2 TIP S 248    37.332   5.849   9.544  1.00 43.81      S
  5  ATOM   2450   OH2 TIP S 250    39.087  -1.293  -9.655  1.00 42.96      S
     ATOM   2451   OH2 TIP S 258    23.938  30.000  30.010  1.00 38.89      S
     ATOM   2452   OH2 TIP S 259    24.949  29.749  32.578  1.00 40.17      S
     ATOM   2453   OH2 TIP S 260    32.111  17.986   1.918  1.00 48.36      S
     ATOM   2454   OH2 TIP S 266    21.404  12.876  25.603  1.00 57.17      S
 10  ATOM   2455   OH2 TIP S 269    35.425  36.767  12.550  1.00 30.70      S
     ATOM   2456   OH2 TIP S 270    52.438  25.529  30.131  1.00 44.85      S
     ATOM   2457   OH2 TIP S 271    53.299  20.156  36.003  1.00 37.15      S
     ATOM   2458   OH2 TIP S 272    50.914   6.919  23.723  1.00 43.29      S
     ATOM   2459   OH2 TIP S 274    31.578  30.795  11.014  1.00 50.15      S
 15  ATOM   2460   OH2 TIP S 275    26.341   7.243  22.447  1.00 39.40      S
     ATOM   2461   OH2 TIP S 276    60.392  18.195  10.235  1.00 37.91      S
     ATOM   2462   OH2 TIP S 277    47.355  -9.081 -10.821  1.00 48.18      S
     ATOM   2463   OH2 TIP S 279    41.304   6.175 -16.647  1.00 38.12      S
     ATOM   2464   OH2 TIP S 282    33.299  21.620  37.881  1.00 46.29      S
 20  ATOM   2465   OH2 TIP S 283    56.469  26.112  -8.575  1.00 43.71      S
     ATOM   2466   OH2 TIP S 287    48.382  26.573   7.246  1.00 41.43      S
     ATOM   2467   OH2 TIP S 288    56.240   7.245 -11.331  1.00 41.79      S
     ATOM   2468   OH2 TIP S 290    49.060  14.978  28.166  1.00 37.03      S
     ATOM   2469   OH2 TIP S 291    37.095  44.270  26.442  1.00 45.08      S
 25  ATOM   2470   OH2 TIP S 292    47.814  -0.384 -13.299  1.00 48.60      S
     ATOM   2471   OH2 TIP S 297    58.081   2.784  -7.841  1.00 41.89      S
     ATOM   2472   OH2 TIP S 298    36.447  45.321  18.644  1.00 54.91      S
     ATOM   2473   OH2 TIP S 299    49.029  23.328   1.767  1.00 30.55      S
     ATOM   2474   OH2 TIP S 301    24.375  13.771   8.634  1.00 48.47      S
 30  ATOM   2475   OH2 TIP S 303    47.904  36.798  28.653  1.00 35.76      S
     ATOM   2476   OH2 TIP S 305    51.156  40.821  27.172  1.00 43.59      S
     ATOM   2477   OH2 TIP S 306    32.943  28.917  35.227  1.00 42.60      S
     ATOM   2478   OH2 TIP S 307    58.462  28.373   6.251  1.00 46.15      S
     ATOM   2479   OH2 TIP S 308    41.964  30.940  36.712  1.00 48.26      S
 35  ATOM   2480   OH2 TIP S 313    51.176  -1.922  -3.336  1.00 50.61      S
     ATOM   2481   OH2 TIP S1001    21.319  36.868  23.805  1.00 36.97      S
     ATOM   2482   OH2 TIP S1002    48.880  32.620  27.617  1.00 44.40      S
     ATOM   2483   OH2 TIP S1003    61.880  19.473  11.767  1.00 45.49      S
     ATOM   2484   OH2 TIP S1004    52.770  21.424  26.815  1.00 24.43      S
 40  ATOM   2485   OH2 TIP S1005    35.373  29.094  36.197  1.00 35.97      S
     ATOM   2486   OH2 TIP S1006    40.815  -6.636   4.389  1.00 43.15      S
     ATOM   2487   OH2 TIP S1007    44.953   1.286  11.272  1.00 49.45      S
     ATOM   2488   OH2 TIP S1010    21.004  16.168  27.009  1.00 48.51      S
     ATOM   2489   OH2 TIP S1011    47.094  41.786   9.243  1.00 50.10      S
 45  ATOM   2490   OH2 TIP S1012    32.479   2.978  14.158  1.00 49.47      S
     ATOM   2491   O12 GLC G   1    48.557  11.372 -12.279  1.00 40.72      G
     ATOM   2492   C11 GLC G   1    48.836  12.133 -11.097  1.00 38.05      G
     ATOM   2493   C13 GLC G   1    49.266  13.554 -11.476  1.00 38.09      G
     ATOM   2494   O14 GLC G   1    49.559  14.299 -10.292  1.00 33.99      G
 50  ATOM   2495   C15 GLC G   1    48.150  14.257 -12.257  1.00 37.32      G
     ATOM   2496   O16 GLC G   1    48.574  15.582 -12.604  1.00 36.74      G
     ATOM   2497   O12 GLC G   2    40.114  -6.634  -6.562  1.00 33.52      G
     ATOM   2498   C11 GLC G   2    38.967  -6.592  -7.404  1.00 31.05      G
     ATOM   2499   C13 GLC G   2    37.712  -6.417  -6.552  1.00 31.56      G
 55  ATOM   2500   O14 GLC G   2    36.554  -6.406  -7.389  1.00 30.70      G
     ATOM   2501   C15 GLC G   2    37.792  -5.109  -5.761  1.00 30.03      G
     ATOM   2502   O16 GLC G   2    36.609  -4.961  -4.975  1.00 29.66      G
     ATOM   2503   O12 GLC G   3    44.030   8.243 -13.470  1.00 37.90      G
     ATOM   2504   C11 GLC G   3    43.950   9.648 -13.690  1.00 38.47      G
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	ATOM	2505	C13 GLC G	3	42.747	9.974	-14.579	1.00 39.52	G
	ATOM	2506	O14 GLC G	3	41.551	9.526	-13.942	1.00 39.39	G
	ATOM	2507	C15 GLC G	3	42.878	9.280	-15.934	1.00 41.43	G
	ATOM	2508	O16 GLC G	3	41.736	9.613	-16.731	1.00 40.78	G
5	ATOM	2509	O12 GLC G	5	40.556	1.005	2.289	1.00 45.25	G
	ATOM	2510	C11 GLC G	5	40.966	2.332	1.960	1.00 40.56	G
	ATOM	2511	C13 GLC G	5	40.187	3.327	2.814	1.00 40.36	G
	ATOM	2512	O14 GLC G	5	38.791	3.169	2.572	1.00 40.71	G
	ATOM	2513	C15 GLC G	5	40.619	4.751	2.464	1.00 40.04	G
10	ATOM	2514	O16 GLC G	5	39.885	5.681	3.256	1.00 36.89	G
	ATOM	2515	O12 GLC G	6	36.951	22.702	40.046	1.00 63.04	G
	ATOM	2516	C11 GLC G	6	37.592	21.583	39.422	1.00 62.46	G
	ATOM	2517	C13 GLC G	6	38.104	21.978	38.030	1.00 61.14	G
	ATOM	2518	O14 GLC G	6	39.034	23.054	38.168	1.00 61.72	G
15	ATOM	2519	C15 GLC G	6	36.948	22.429	37.126	1.00 60.51	G
	ATOM	2520	O16 GLC G	6	35.992	21.372	36.960	1.00 58.61	G
	ATOM	2521	O12 GLC G	7	37.316	0.281	14.299	1.00 73.45	G
	ATOM	2522	C11 GLC G	7	37.655	-0.758	15.222	1.00 72.78	G
	ATOM	2523	C13 GLC G	7	36.592	-1.856	15.157	1.00 72.98	G
20	ATOM	2524	O14 GLC G	7	35.320	-1.299	15.498	1.00 73.88	G
	ATOM	2525	C15 GLC G	7	36.924	-2.989	16.134	1.00 73.66	G
	ATOM	2526	O16 GLC G	7	36.972	-2.493	17.478	1.00 75.38	G
	ATOM	2527	O12 GLC G	8	51.921	21.898	5.908	1.00 62.51	G
	ATOM	2528	C11 GLC G	8	52.447	20.871	5.063	1.00 63.42	G
25	ATOM	2529	C13 GLC G	8	51.476	20.597	3.908	1.00 64.28	G
	ATOM	2530	O14 GLC G	8	51.297	21.794	3.150	1.00 66.28	G
	ATOM	2531	C15 GLC G	8	50.121	20.137	4.448	1.00 64.49	G
	ATOM	2532	O16 GLC G	8	49.233	19.886	3.357	1.00 64.01	G
	ATOM	2533	O12 GLC G	10	36.044	37.499	29.523	1.00 56.89	G
30	ATOM	2534	C11 GLC G	10	35.164	36.645	30.259	1.00 56.97	G
	ATOM	2535	C13 GLC G	10	33.849	36.489	29.494	1.00 56.11	G
	ATOM	2536	O14 GLC G	10	33.248	37.772	29.308	1.00 56.44	G
	ATOM	2537	C15 GLC G	10	32.900	35.580	30.277	1.00 55.84	G
	ATOM	2538	O16 GLC G	10	31.674	35.442	29.557	1.00 55.39	G
35	ATOM	2539	O3G ATP N	1	46.280	25.658	5.170	1.00 51.49	N
	ATOM	2540	PG ATP N	1	46.464	25.053	3.691	1.00 52.22	N
	ATOM	2541	O1G ATP N	1	47.406	23.911	3.763	1.00 51.41	N
	ATOM	2542	O2G ATP N	1	46.794	26.182	2.784	1.00 52.07	N
	ATOM	2543	O3B ATP N	1	44.976	24.513	3.344	1.00 51.01	N
40	ATOM	2544	PB ATP N	1	44.560	22.969	3.605	1.00 50.20	N
	ATOM	2545	O1B ATP N	1	43.083	22.898	3.669	1.00 49.41	N
	ATOM	2546	O2B ATP N	1	45.345	22.474	4.766	1.00 50.34	N
	ATOM	2547	O3A ATP N	1	45.070	22.231	2.255	1.00 47.77	N
	ATOM	2548	PA ATP N	1	45.075	20.613	2.121	1.00 42.84	N
45	ATOM	2549	O1A ATP N	1	45.547	20.291	0.754	1.00 43.81	N
	ATOM	2550	O2A ATP N	1	45.807	20.035	3.270	1.00 45.03	N
	ATOM	2551	O5* ATP N	1	43.516	20.223	2.245	1.00 41.73	N
	ATOM	2552	C5* ATP N	1	42.528	20.925	1.489	1.00 37.57	N
	ATOM	2553	C4* ATP N	1	41.127	20.379	1.776	1.00 39.45	N
50	ATOM	2554	O4* ATP N	1	40.907	19.024	1.279	1.00 37.72	N
	ATOM	2555	C3* ATP N	1	40.777	20.321	3.251	1.00 38.48	N
	ATOM	2556	O3* ATP N	1	40.360	21.615	3.697	1.00 40.42	N
	ATOM	2557	C2* ATP N	1	39.608	19.374	3.270	1.00 37.58	N
	ATOM	2558	O2* ATP N	1	38.410	20.076	2.924	1.00 35.98	N
55	ATOM	2559	C1* ATP N	1	39.939	18.346	2.173	1.00 35.55	N
	ATOM	2560	N9 ATP N	1	40.628	17.156	2.747	1.00 31.76	N
	ATOM	2561	C8 ATP N	1	41.864	17.126	3.274	1.00 30.49	N
	ATOM	2562	N7 ATP N	1	42.143	15.877	3.667	1.00 29.75	N
	ATOM	2563	C5 ATP N	1	41.088	15.118	3.390	1.00 27.49	N

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     ATOM   2564  C4   ATP N   1        40.125  15.925   2.810  1.00 30.02        N
     ATOM   2565  N3   ATP N   1        38.937  15.389   2.431  1.00 27.11        N
     ATOM   2566  C2   ATP N   1        38.679  14.085   2.615  1.00 25.62        N
     ATOM   2567  N1   ATP N   1        39.597  13.283   3.175  1.00 21.76        N
  5  ATOM   2568  C6   ATP N   1        40.800  13.768   3.571  1.00 23.90        N
     ATOM   2569  N6   ATP N   1        41.698  12.964   4.127  1.00 21.94        N
     ATOM   2570  S    SO4 I   1        58.680   8.493  -0.639  1.00 56.05        I
     ATOM   2571  O1   SO4 I   1        57.956   7.875   0.483  1.00 58.83        I
     ATOM   2572  O2   SO4 I   1        57.886   9.607  -1.188  1.00 57.04        I
 10  ATOM   2573  O3   SO4 I   1        58.906   7.478  -1.683  1.00 57.47        I
     ATOM   2574  O4   SO4 I   1        59.976   9.008  -0.156  1.00 57.51        I
     ATOM   2575  S    SO4 I   2        39.339   4.855   7.057  1.00 84.24        I
     ATOM   2576  O1   SO4 I   2        39.390   6.175   7.711  1.00 85.02        I
     ATOM   2577  O2   SO4 I   2        40.101   4.897   5.797  1.00 84.75        I
 15  ATOM   2578  O3   SO4 I   2        37.936   4.506   6.766  1.00 84.94        I
     ATOM   2579  O4   SO4 I   2        39.931   3.842   7.954  1.00 84.44        I
     ATOM   2580  S    SO4 I   3        38.987  -2.256   3.310  1.00 58.58        I
     ATOM   2581  O1   SO4 I   3        37.734  -1.675   3.827  1.00 59.11        I
     ATOM   2582  O2   SO4 I   3        39.460  -1.454   2.172  1.00 59.91        I
 20  ATOM   2583  O3   SO4 I   3        38.743  -3.640   2.866  1.00 60.97        I
     ATOM   2584  O4   SO4 I   3        40.014  -2.260   4.369  1.00 59.58        I
     ATOM   2585  S    SO4 I   4        34.397   5.289  30.981  1.00 64.34        I
     ATOM   2586  O1   SO4 I   4        33.627   6.528  30.742  1.00 60.43        I
     ATOM   2587  O2   SO4 I   4        34.337   4.427  29.782  1.00 60.11        I
 25  ATOM   2588  O3   SO4 I   4        33.816   4.572  32.133  1.00 64.39        I
     ATOM   2589  O4   SO4 I   4        35.806   5.626  31.277  1.00 63.55        I
     ATOM   2590  S    SO4 I   5        55.074  -6.984  -3.711  1.00 75.40        I
     ATOM   2591  O1   SO4 I   5        54.657  -7.518  -2.399  1.00 74.66        I
     ATOM   2592  O2   SO4 I   5        54.209  -5.845  -4.065  1.00 74.96        I
 30  ATOM   2593  O3   SO4 I   5        54.950  -8.034  -4.742  1.00 74.22        I
     ATOM   2594  O4   SO4 I   5        56.477  -6.532  -3.633  1.00 75.15        I
     ATOM   2595  O2   PO4 P 100        57.362  24.998  13.149  1.00 66.76        P
     ATOM   2596  O3   PO4 P 100        59.399  26.166  13.761  1.00 66.89        P
     ATOM   2597  O4   PO4 P 100        57.761  25.606  15.462  1.00 67.43        P
 35  ATOM   2598  O1   PO4 P 100        57.264  27.325  13.818  1.00 65.91        P
     ATOM   2599  P    PO4 P 100        57.947  26.025  14.048  1.00 66.69        P
     END
```

Example 5: PDK1 fragments

We produced constructs for expression of different forms of PDK1 in bacteria. The constructs were either in TRC vectors, pET-15b vector and pGEX expression vector to enable the expression of GST fused N-terminally to PDK1. PDK1 expressed from pGEX 51-556 (ie residues 51 to 556 of PDK1) was found to be highly degraded.

PDK1 protein was also expressed with N-terminal His tags from vector TRC comprising PDK1 sequences 51-556, 51-404 and 1-360, or pET15b 51-404 and tested for expression levels and activity. The expression was generally low, around 0.2 mg/L culture. The specific activity was lower than the His-tagged 51-556 protein purified from baculovirus cells. In the case of PDK1 51-404 expressed from pET-15b construct the level of expression turned out to be very variable. This was probably due to instability of the plasmid since we produced evidence that after a growth of 0.2 units of absorbance, (as measured in a spectrophotometer at 600 nm wavelength) the cells growing faster in the culture were actually not harbouring the plasmid with ampiciline resistance. The instability of the plasmid can be due to toxicity produced by basal expression of PDK1. Although production in bacteria was the theoretical best expression system to avoid heterogeneity due to the different extent of phosphorylation of the different phosphorylation sites in hPDK1, it was found that the protein was either degraded, expressed to low levels, had 5 times less specific activity, or was possibly toxic.

The His-tagged purified PDK1 51-556 protein obtained from baculovirus expression system was homogeneous as depicted by the appearance of one band after by SDS-PAGE analysis of a sample.

Nevertheless, the analysis after isoelectric focussing revealed a large smear of protein covering several units of pH. This analysis suggested that the protein was not homogeneous in terms of its isoelectric point, possibly due to the number of phosphorylation sites which were not homogeneously phosphorylated. This protein did not crystallise.

We purified to homogeneity a truncated His-Myc tagged PDK1 (51-404) which lacks the N-terminal 50 residues and the C-terminal 152 residues which include the PH domain. This protein, produced by a baculovirus expression system, had similar characteristics to the full length wild type PDK1 in terms of its activity towards the peptide substrate T308tide, its activation by the peptide PIFtide, and the binding to PIFtide (as analysed by BiaCore). The purified protein was screened for crystallisation conditions using Hampton Research kits (144 different conditions). Crystallisation conditions were screened with two concentrations of PDK1, in the presence or absence of PIFtide, Staurosporine, at 20^OC and in the presence of PIFtide at 4^OC. No protein crystals were observed after 6 months, suggesting that this construct was not suitable for forming crystals although all other characteristics were similar to wild type protein.

The His-Myc PDK1 51-404 purified protein was also subjected to protease treatments in order to obtain a protease-insensitive molecule for increasing the chances of obtaining a shorter, stable variant of PDK1. Different protease treatments were tested. Treatment with Glu-C produced a polypeptide of approximately 38 KDa which was stable. This PDK1 protein was active and lacked the His-tag and part of the Myc-tag, and possibly part of the C-terminal residues. This protein was also set up for crystallography screenings. Some crystals were obtained using this preparation after 4 months, but they were not followed up.

A protein kinase corresponding to residues PDk1 51-387 was also produced, in an identical vector to that used to produce the protein PDK1 51-359. Interestingly, this protein was similar to wild type and PDK1 51-404, but had extreme problems for concentration using conventional methods. The protein could not be concentrated further than 2.5 mg/ml, and no crystals were obtained using this construct.

The PDK1 protein that finally crystallised is lacking the first 50 aminoacids and was constructed to end at position 359. This protein was stable in the absence of the PH domain and aminoacids that in hPDK1 link the catalytic domain with the PH domain. The construct PDK1 51-359 was also short enough that no other described phosphorylation sites besides activation loop phosphorylation site 241 were present.

Example 6: Structural basis for UCN-01 specificity and PDK1 inhibition

The staurosporine derivative UCN-01 (7- hydroxyl staurosporine) has been reported to be a potent inhibitor for PDK1 and is currently in clinical trials for the treatment of cancer. Here we report the crystal structures of staurosporine and UCN-01 in complex with the kinase domain of PDK1. We show that although staurosporine and UCN-01 interact with the PDK1 active site in an overall similar manner, the UCN-01 7-hydroxylgroup, which is not present on staurosporine, generates direct and water-mediated hydrogen bonds with active site residues. Inhibition data from UCN-01 tested against a panel of 29 different kinases show a different pattern of inhibition compared to staurosporine. We discuss how these differences in inhibition could be attributed to specific interactions with the additional 7-hydroxyl-group as well as by the size of the 7-hydroxyl-binding pocket. This information could lead to opportunities for structure-based optimisation of PDK1 inhibitors.

Insulin and growth factor signalling is mediated by the activation of a lipid kinase, phosphatidylinositol-3-kinase (PI3K), which produces the second messenger molecule phosphatidylinositol(3,4,5)trisphosphate (PtdIns(3,4,5)P) [1]. Upon generation of PtdIns(3,4,5)P, 3-Phosphoinositide Dependent protein Kinase-1 (PDK1) and protein kinase B (PKB, also known as Akt) are co-localised at the plasma membrane through interaction of their Pleckstrin Homology (PH) domains with PtdIns(3,4,5)P [2, 3]. PDK1 activates PKB by phosphorylation of its T-loop (Thr308 in PKB) [4, 5]. PDK1 also activates other protein kinases related to PKB, including isoforms of p70 ribosomal S6 kinase (S6K) [6], serum and glucocorticoid responsive kinases (SGK) [7] and p90 ribosomal S6 kinase (Rsk) [8]. These kinases lack PH domains and do not bind PtdIns(3,4,5)P3, and are thought to be activated by a different mechanism, in which the substrates require a priming phosphorylation in a conserved hydrophobic motif (HM) at their C-terminus (reviewed in [9]). This phosphorylation creates a docking motif that specifically interacts with a pocket on the N-terminal lobe of the PDK1 kinase domain (termed PDK1 interacting fragment (PIF) pocket) [10, 11] bringing PDK1 together with its substrate and enabling PDK1 to phosphorylate these kinases in their T-loop, thereby activating them. A significant number of human cancers possess elevated PtdIns(3,4,5)P levels due to mutations in a number of genes that regulate the production and degradation of this 3-phosphoinositide. One of the most frequently found mutations occurs in the PtdIns(3,4,5)P 3-phosphatase (PTEN) resulting in constitutive activation of PKB and S6K, which are thought to be major contributors to the proliferation and the survival of such tumour cells [12]. Thus, inhibitors of PDK1 have the potential to act as anti-cancer agents as they would be expected to suppress activation of S6K and PKB and inhibit cell growth and induce apoptosis of cancer cells that possess elevated levels of PtdIns(3,4,5)P.

PDK1 consists of an N-terminal kinase domain and a C-terminal PH-domain [13]. The structure of the PDK1 kinase domain has been solved (see the preceding Examples and [11]) and leads to a definition of the residues lining the ATP binding site and an understanding of the PDK1 activation mechanism. The PIFbinding pocket could be identified, together with a specific pocket for the phosphorylated Ser/Thr residue on the HM of substrate kinases. Staurosporine, a natural product ATP-competitive inhibitor, inhibits many kinases in the low nM range [14], and therefore displays a high cytotoxicity [15]. UCN-01 (7-hydroxyl staurosporine) is a derivative with an additional hydroxyl group on the lactam ring (Fig. 1). It was originally described as a PKC-selective inhibitor isolated from Streptomyces sp. cultures [16], although further studies showed it to be more non-specific [14, 17]. UCN-01 potently inhibits the growth and induces apoptosis of many cancer cells and these effects are thought to be unrelated to PKC inhibition [18, 19]. Due to its anti-tumour activity in vivo and in vitro, UCN-01 is currently undergoing clinical trials with positive effects being reported in the phase 1 studies (reviewed in [19]). Recent reports suggested the cell cycle checkpoint kinase Chk1 [20] and PDK1 [21] may be key targets of UCN-01 in inhibiting the growth of cancer cells, as both kinases are inhibited by UCN-01 in the low nM range.

Here we report the structures of the PDK1 kinase domain in complex with staurosporine and UCN-01, demonstrating the presence of a pocket that accommodates the 7-hydroxyl group of UCN- 01. Specificity tests against a panel of 29 kinases shows that although both staurosporine and UCN-01 are relatively non-specific inhibitors, the fingerprint analysis of UCN-01 inhibition with a panel of protein kinases is significantly different from that of staurosporine. We also perform analysis of residues predicted to line the UCN-01 hydroxyl pocket on a number or protein kinases, and propose a

general model that could account for the different sensitivity of protein kinases for staurosporine and UCN-01.

Methods

5 *Expression, purification and crystallisation*

Human PDK1 (residues 51-359) was expressed using a baculovirus mediated infection of the SF21 insect cell line and purified as described in the preceding examples and [11] with the following differences: After elution of the His-tagged protein from the Ni-NTA-agarose beads with 200

10 mM imidazole, the protein was dialysed against 250 mM NaCl, 25 mM Tris pH 7.5, 1 mM DTT for 3 hours at 4°C. Proteolysis with GST-tagged PreScission protease was performed overnight at 4 °C.

For crystals of the PDK1-UCN-01 complex, 100 μl of PDK1 at a

15 concentration of 6.6 mg/ml was mixed with 30 μl UCN-01 (5.3 mM in 50 % ethanol) and incubated on ice for 2 hours. The protein was crystallized using sitting drop vapour diffusion. 1.25 μl of protein solution was mixed with 0.25 μl cobaltous chloride hexahydrate (0.1 M) and 1 μl mother liquor, consisting of 2.1 M ammonium sulphate, 0.1 M Tris-HCl pH 8.5.

20 Hexagonal, rod-shaped crystals grew at 20 °C and reached a maximum size of 0.05 x 0.05 x 0.3 mm after 7 days. After soaking for 3 seconds in a cryo-protection solution (2.1 M ammonium sulphate, 0.1 M Tris-HCl pH 7.2, 25 % glycerol) crystals were frozen in a stream of cold nitrogen.

25 PDK1 in complex with staurosporine was crystallized using the hanging drop technique. Drops consisted of 1μl PDK1 at 7.6 mg/ml, 1 μl mother liquor (2.1 M ammonium sulphate, 0.1 M Tris- HCl pH 7.2) and 0.25 μl staurosporine (10 mM in DMSO). Hexagonal shaped crystals suitable for

data collection appeared after 6 weeks at 20 C. Crystals were soaked in 1.7 M ammonium sulphate, 0.1 M Tris-HCl pH 7.2, 15% glycerol and frozen in a stream of cold nitrogen.

5 *Data collection, structure solution and refinement*

Data on the PDK1-staurosporine and PDK1-UCN-01 complexes were collected at the European Synchrotron Radiation Facility (Grenoble, France) beamline ID14-EH4. The temperature of the crystals was maintained at 100 K using a nitrogen cryostream. Data were processed

10 using the HKL package [22] with final statistics shown in Table 3. The structures were solved by rigid body refinement with CNS [23] using the previously determined PDK1 structure (See previous Examples; PDB code 1H1W) [11] as a starting model which resulted in an initial R-factor of 0.306 (R_{free}= 0.284) for PDK1-staurosporine and 0.299 (R_{free} = 0.311) for

15 PDK1-UCN-01. Model building with O [24] and iterative refinement in CNS, including solvent molecules and the T-loop phosphorylation site, resulted in final R-factors as shown in Table 3. The ATP binding site showed well-defined density in the unbiased $|F_o|$-$|F_c|$, ϕ_{calc} maps for all atoms of staurosporine and UCN-01, including the 7-hydroxyl group (Fig.

20 8). CNS topologies and coordinates for the inhibitors were generated with PRODRG [25]. No electron density could be observed for residues 51-72 (N-terminus), residues 231-239 (T-loop) and residue 359 (C-terminus) in the PDK1-UCN-01 complex. Residues 51-71 (N-terminus) and 233-238 (T-loop) were disordered in the PDK1-staurosporine complex.

25

Determination of inhibition and specificity

Protein kinase assays: PDK1 was assayed for 10 min at 30 °C in a 50 μl assay mixture in 50 mM Tris pH 7.5, 0.1 mM EGTA, 0.1% 2-

mercaptoethanol, containing 100 μM PDK1tide substrate peptide (KTFCGTPEYLAPEVRREPRILSEEEQEMFRDFDYIADWC) (SEQ ID NO:112), 10 mM magnesium acetate, 100 μM [γ-^{32}P]ATP (200 cpm/pmole) as described previously [10]. Other protein kinases employed in Table 5,

5   were assayed as described previously [17, 26].

Results & Discussion

Structures of the staurosporine and UCN-01 complexes

PDK1 (residues 51-359) was co-crystallized with staurosporine and UCN-01, and synchrotron diffraction data on a thin hexagonal needle were

10   collected to 2.3 Å and 2.5 Å resolution, respectively.

In the unbiased |F$_o$|-|F$_c$|, φ$_{calc}$ maps well defined (>3.0σ) density could be observed in the ATP binding site of the kinase, covering all staurosporine/UCN-01 atoms including the 7-hydroxyl group (Fig. 8). After

15   initial rounds of protein model building and inclusion of water molecules, the inhibitor molecules were built and refined with full occupancy to average B-factor of 18.5 Å^2 (staurosporine) and 17.3 Å^2(UCN-01). Further refinement resulted in a final PDK1-staurosporine model with R= 0.218 (R$_{free}$ = 0.255) and a final PDK1-UCN-01 model with R = 0.184 (R$_{free}$ =

20   0.257), both with good stereochemistry (Table 3).

The staurosporine molecule is located in the ATP-binding site (which lies between the N-terminal and C-terminal lobes of kinases [27, 28]), at the same position described for the inhibitor in complex with the closely related

25   (38 % sequence identity) protein kinase A (PKA, [29], PDB code 1STC) (Fig. 8). Hydrophobic residues on both sides of the ATP binding cleft sandwich the heterocyclic moiety of staurosporine, namely Leu88, Val96, Ala109, Leu98 (small lobe) and Thr222, Leu212 of the larger lobe (Fig. 1).

Similar to the PKA-staurosporine complex, the lactam group mimics the interactions of the adenine base in ATP with the protein backbone, where 2 conserved hydrogen bonds are formed between the lactam-nitrogen N6 in staurosporine (nomenclature according to [30]) and the backbone-oxygen of Ser160, and the lactam-oxygen at the C5 position and the backbone-nitrogen of Ala162 (Table 4). An additional hydrogen bond is mimicked in the staurosporine sugar-moiety, where the methyl-amino group contacts oxygen O 2 of Glu166, similar to the hydrogen bond with the ribose in the PDK1-ATP complex [11], and also the backbone carbonyl of Glu209 (Table 4).

The UCN-01 molecule occupies the same position in the ATP binding site as staurosporine (maximum atomic shift = 0.35 Å) (Fig. 9). The same hydrophobic interactions are made to the heterocyclic moiety in the PDK1-staurosporine complex. Hydrogen bonding interactions to the heterocycle and the sugar moiety are also conserved, with similar geometry (Table 4). However, the 7-hydroxyl group of UCN-01 forms several novel hydrogen bonds (Fig. 9, Table 4). It hydrogen bonds directly to Oγ1 of Thr222 (Fig. 9, Table 4). In addition, an ordered water molecule (B-factor = 24.0 Å^2) is found in a position where it contacts the 7-hydroxyl (distance = 3.0 Å, Table 4) and the oxygen Oϵ1 of Gln220 (distance = 2.5 Å) the side chain of which is shifted towards the ligand (1.5 Å for Cδ, rotation of 82° around χ_1) compared to the PDK1-STO complex. However, the water molecule is buried in a predominantly hydrophobic pocket, lined by Val143, Leu212 and Cγ2 of Thr222 (Fig. 9). Val143 also changes its position compared to the PDK1-staurosporine complex (Fig. 9), moving further towards the back of the pocket (shift of 0.7 °A for the Cα carbon, and a rotation of 100° around χ_1) and displaces an ordered water molecule present in the PDK1-staurosporine complex (Fig. 9), and also observed in other kinase-staurosporine complexes [31, 30]. These changes result in more space to

accommodate the bulky 7-hydroxyl group on UCN-01 as indicated by a 6 °A^3 increase in ligand volume (calculated with VOIDOO [32]).

Comparison with Chk1-UCN-01

High resolution data for the Chk1 kinase bound to staurosporine and UCN-01 is available (PDB code 1NVQ [30]). In Chk1, Ser147, the equivalent of Thr222 in PDK1, also hydrogen bonds the UCN-01 7-OH directly. In addition, a water mediated network of hydrogen bonds to UCN-01 is observed. However, in Chk1 the water molecule that hydrogen bonds UCN-01 occupies a different position (shifted 5.2 Å compared to the PDK1-UCN-01 complex). Chk1 appears to have a more extended hydrophilic cavity, as there are 2 additional buried water molecules present also in the Chk1-staurosporine complex. The corresponding residue to Gln220 in PDK1 is a Lys (Lys145) in Chk1, which does not interact with the ligand but points away from it.

UCN-01 inhibition and specificity

PDK1 inhibition by UCN-01 and staurosporine was measured using kinase assays with P^{32}-labelled ATP. PDK1 is inhibited by UCN-01 with an IC_{50} value of 5 nM, and by staurosporine with an IC_{50} of 6.5 nM. As a measure for overall specificity of UCN-01 and staurosporine, the effect of these inhibitors was tested against a panel of 29 protein kinases as described previously [17, 26]. The results are shown in Table 5 as percentage of control activity. These data further confirm that UCN-01 and staurosporine are aspecific inhibitors. UCN-01 at 1 μM concentration reduces the activity of nine kinases in the panel to less than 10%, and of ten others to below 60% of control activity. Staurosporine at 1 μM will inhibit twelve kinases to less than 10% control activity, and another ten to below 60%. Interestingly, however, several of the protein kinases were differentially inhibited by

staurosporine and UCN-01 (Table 5). In an attempt to understand these differences the panel of kinases was divided in four distinct classes: (a) similar inhibition, (b) stronger inhibition by staurosporine than by UCN-01, (c) stronger inhibition by UCN-01 than by staurosporine, and (d) no
5   inhibition (Table 5). As the additional 7-hydroxyl group is the only difference in the ligand molecules (Fig. 8), and staurosporine and UCN-01 occupy the same position with similar interactions in the binding site (Fig.9), the residues contacting the extra hydroxyl group were identified for PDK1 and extracted from a sequence alignment of all protein kinases used
10   in the panel (Table 5). A structure-based sequence alignment of known kinase structures was obtained from [33], which was used to validate the sequence-based sequence alignment (Table 5). The nature of the side chains lining the hydroxyl-pocket could provide a partial explanation for the relative difference between UCN-01 and staurosporine inhibition. Two
15   trends can be observed. For the kinases that are inhibited by UCN-01, there appears to be a preference for a side chain capable of hydrogen bonding the 7-hydroxyl in the hydroxyl-pocket. This is in agreement with the presence of a Thr/Ser residue that hydrogen bonds the 7-hydroxyl in the structures of PDK1 (Thr222) and Chk1 (Ser147) bound to UCN-01. Seven out of ten
20   kinases that are hit equally by staurosporine and UCN-01 (group (a)) appear to have a potential hydrogen bonding residue (Table 5). The kinases that are more potently inhibited by UCN-01 than by staurosporine (group (c)) contain a Thr at the Thr222 equivalent position (Table 5). Five out of nine kinases that are inhibited more potently by staurosporine than by UCN-01
25   (group (b)) lack a potential hydrogen binding partner in the 7-hydroxyl-pocket (Table 5).

A second trend which appears to determine specificity is the size of the residues lining the hydroxyl-pocket. If the predicted total volume of the
30   residues (calculated with the BL- set of side chain volumes [34]) at the

positions indicated in Table 5 is set against the activity in the presence of UCN-01, a correlation coefficient of 0.6 is obtained. This suggests that despite inaccuracies in this approach, such as the absence of structural information on precise side chain conformation and water molecules, a weak correlation between predicted hydroxyl pocket volume and UCN-01 inhibition exists. For instance, PKA contains a possible hydrogen bonding partner for UCN-01 (Thr183), but Met134 in the centre of the hydroxyl pocket may leave no space for the extra hydroxyl group (Table 5). A similar arrangement of residues can be observed for MAPKAP-K2 (Table 5). This size dependency may also play a role for the protein kinases neither hit by staurosporine nor UCN-01. The sequence alignment shows that the Val143 and Thr222 equivalent residues are replaced by bulkier Leu or Ile residues in several of the Mitogen Activated Protein Kinase families (Table 5). To investigate the effect of these bulkier side chains on the hydroxyl pocket, we, starting from the PDK1 crystal structure, replaced residues Val143 with Ile and Thr222 with Leu in standard side chain rotamers (in O [24]), which indeed resulted in van der Waals clashes with C7 of staurosporine (shortest distances: 2.8 Å for Leu222, 3.5 Å for Ile143), and may therefore explain the lack of susceptibility towards UCN-01 in the Mitogen Activated Protein Kinase families. CDK2 is inhibited by both staurosporine and UCN-01 similarly, however this kinase lacks a hydrogen bonding partner for the 7-hydroxyl and contains a bulky Phe (Phe80) at the Leu159 equivalent position. In a superposition of CDK2-staurosporine structure [31] with PDK1-UCN-01 (RMSD = 1.3Å on Cα atoms) staurosporine is seen to be shifted by 1.2 Å out of the potential hydroxyl pocket due to presence of the bulky Phe80. Interaction of the 7-hydroxyl on UCN-01 was described to be water mediated in CDK2 due to the lack of hydrogen bonding residues [35]. This particular example highlights the limitations of the approach described above. Other examples where none of the described effects account for the observed behaviour are AMPK and

MSK1. Both MSK1 and SGK1 show the same sequence in their hydroxyl-pocket with Thr406/Thr407, respectively, as potential hydrogen bonding partners, but both were placed in different groups. MSK1 activity is abolished by 1 μM staurosporine, but shows residual activity (11 %) with

5   UCN-01. SGK1 activity is at 25% of control activity with 1 μM UCN-01, but twice as high with staurosporine.

Conclusions

UCN-01 was subjected to a specificity analysis against an in-house panel of 29 protein kinases. Contrary to the suggestions of some previous reports,

10   the data show that UCN-01 is not a specific inhibitor as it inhibited more than half of the tested kinases at significant levels. A direct comparison with staurosporine, however, showed a different pattern of inhibition, and was the subject of further analysis. We have reported the crystal structures of PDK1 in complex with the inhibitors staurosporine and UCN-01. Both

15   inhibitors appear to bind to PDK1 in a similar fashion compared to the Chk1-UCN-01 or PKA-staurosporine [29] complex, with additional hydrogen bonding interactions at the UCN-01 7-hydroxyl group. This moiety is hydrogen bonded directly to Thr222 and indirectly via an ordered water molecule to Gln220. A different water-mediated hydrogen bonding

20   network is also observed in other UCN-01 complexes known to date [35, 30], and might serve as a starting point for further structure-based optimisation. The residues around the 7-hydroxyl group ("hydroxyl-pocket") were aligned with known kinase structures and kinases sequences. It is apparent that spatial effects in the identified pocket play a key role in

25   determining UCN-01 inhibition, as does the presence of hydrogen bonding partners for the additional hydroxyl group.

Table 3

Details of data collection & structure refinement. Values between brackets
are for the highest resolution shell. Crystals were cryo-cooled to 100 K. All
measured data were included in structure refinement.

5

Dataset	Staurosporine	UCN-01
Space group	P3$_2$21	P3$_2$21
Cell dimensions (Å)	a=124.17	a=123.39
	b=124.17	b=123.39
	c=47.31	c=47.12
Resolution range (Å)	25-2.30 (2.38-2.30)	25-2.50 (2.59-2.50)
# Observed reflections	31730 (3091)	68515 (6290)
# Unique reflections	18018 (1794)	14395 (1430)
Redundancy	1.8 (1.7)	4.8 (4.4)
I/σI	7.5 (1.8)	4.5 (2.6)
Completeness (%)	95.8 (95.8)	100.0 (99.9)
R$_{merge}$	0.096 (0.505)	0.167 (0.688)
R$_{cryst}$, R$_{free}$	0.218, 0.255	0.189, 0.257
RMSD from ideal geometry		
Bonds (Å)	0.007	0.009
Angles (°)	1.7	1.8
B-factor RMSD (Å) (bonded, main chain)	1.5	1.4
<B> protein (Å)	31.5	27.3
<B> inhibitor (Å)	18.5	17.4

Table 4

Hydrogen bonding between inhibitors and PDK1. Hydrogen bonds between
PDK1 and UCN-01 / staurosporine (STO) were calculated with WHAT IF
[36] using the HB2 algorithm [37]. This algorithm gives a 0 (no hydrogen
bond) to 1 (optimal hydrogen bond) score to reflect hydrogen bond
geometry (HB2 column). Donor-acceptor distances are also listed (D-A).

Inhibitor	Protein/H$_2$O	UCN-01 D-A (Å)	UCN-01 HB2	STO D-A (Å)	STO HB2	Comment
O5	N-Ala162	2.8	0.76	3.0	0.81	Conserved
N6	O-Ser162	2.9	0.80	3.1	0.67	Conserved
N4'	O-Glu209	3.2	0.68	3.1	0.39	Conserved
N4'	Oε2-Glu166	2.6	0.63	2.5	0.45	Conserved
O7	Oγ1-Thr222	3.0	0.56			7-hydroxyl
O7	H$_2$O	3.0	0.89			Water mediated to (Oε1-Gln220)

Table 5

Comparison of inhibition by UCN-01 vs. staurosporine and hydroxyl
pocket-lining residues.

The indicated protein kinases were assayed at 0.1 mM ATP as described
previously [17, 26], in the absence or presence of 1μM staurosporine (STO)
or UCN-01. Results are presented as percentage of kinase activity compared
to that in control incubations. The activity results displayed in the two
columns are an average of a triplicate determination. Abbreviations not

defined in main text: ROCKII, Rho-dependent protein kinase-II; AMPK, AMP-activated protein kinase; MKK1, MAP-kinase kinase-1; PRAK, p38-regulated/activated protein kinase; PHK, phosphorylase kinase; CK2, Casein kinase-2; CHK1, cell cycle checkpoint kinase-1; DYRK, dual specificity tyrosine phosphorylated and regulated kinase; CSK, C-terminal Src kinase. Residues lining the hydroxyl pocket are shown in the last five columns, as derived from a multiple sequence alignment with T-Coffee [38].

Kinase	STO	UCN-01					
Both STO and UCN-01 inhibit							
			Met134	Val143	Leu159	Gln220	Thr222
PDK1	5 ± 1	0 ± 1					
CHK1 (1NVQ [30])	3 ± 1	1 ± 0	Ile	Val	Leu	Lys145	Ser147
PKCα	8 ± 2	1 ± 0	Leu	Thr	Met	Lys	Ala
AMPK	0 ± 0	1 ± 1	Leu	Ile	Met	Lys	Ala
PHOS.KINASE (1PHK [39])	2 ± 3	1 ± 2	Leu	Ile	Phe	Lys	Thr
Lck (1QPJ [40])	0 ± 0	3 ± 1	Met	Val	Thr	Lys	Ala
CDK2/cyclin A (1AQ1 [31])	12 ± 12	8 ± 0	Leu	Val	Phe80	Lys	Ala
PKBΔPH (1O6K [41])	8 ± 2	9 ± 1	Leu	Thr	Met	Lys	Thr
ROCK-II	9 ± 5	13 ± 2	Met	Val	Met	Lys	Ala
S6K1	24 ± 8	21 ± 4	Leu	Val	Leu	Lys	Thr
GSK3β (1I09 [42])	29 ± 6	25 ± 5	Met	Val	Leu	Lys	Cys
STO inhibits stronger than UCN-01							
MSK1	1 ± 0	11 ± 0	Leu	Val	Leu	Val	Thr40

							6
DYRK1α	2 ± 2	15 ± 2	Leu	Met	Phe	Lys	Val
PKA (1STC [29])	4 ± 1	27 ± 2	Val	Met134	Gln		Thr183
MKK1	5 ± 8	53 ± 1	Leu	Val	Met	Lys	Cys
MAPKAP-K2	23 ± 1	60 ± 1	His	Val	Met	Lys	Thr
CSK (1BYG [43])	25 ± 8	58 ± 3	Met	Val	Thr	Lys	Ser
SAPK3/p38γ (1CM8 [44])	37 ± 0	94 ± 8	Leu	Ile	Met	Lys	Leu
SAPK4/p38δ	40 ± 5	100 ± 7	Leu	Ile	Met	Lys	Leu
PRAK	48 ± 1	89 ± 1	His	Val	Met	Lys	Cys

UCN-01 inhibits stronger than STO

MAPKAP-K1a	18 ± 10	1 ± 1	Leu	Val	Leu	Lys	Thr341
SGK1	51 ± 4	22 ± 4	Leu	Val	Leu	Val	Thr407

Neither UCN-01 nor STO inhibits

MAPK2/ERK2 (1ERK [45])	100 ± 4	107 ± 5	Leu	Ile	Gln	Lys	Cys
JNKSAPK1c	91 ± 3	112 ± 6	Met	Ile	Met	Lys	Leu
SAPK2α/p38 (1P38 [46])	76 ± 4	107 ± 5	Leu	Ile	Thr	Lys	Leu
SAPK2β/p38β2	84 ± 11	106 ± 4	Leu	Ile	Thr	Arg	Leu
CK2 (1F0Q [47])	95 ± 4	102 ± 11	Leu	Val	Phe	Arg	Ile
CK1 (1CKI [48])	95 ± 11	96 ± 0	Tyr	Pro	Met	Tyr	Ile

NEK6	109 ± 2	80 ± 7	Leu	Ile	Leu	Lys	Gly

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Example 7: Co-ordinates for PDK1 fragment co-crystallised with Staurosporine

```
     REMARK coordinates from restrained individual B-factor refinement
     REMARK refinement resolution: 25.0 - 2.30 A
 5   REMARK starting r= 0.2196 free_r= 0.2545
     REMARK final    r= 0.2182 free_r= 0.2553
     REMARK B rmsd for bonded mainchain atoms=  1.536  target= 1.5
     REMARK B rmsd for bonded sidechain atoms=  2.154  target= 2.0
     REMARK B rmsd for angle mainchain atoms=  2.576  target= 2.0
10   REMARK B rmsd for angle sidechain atoms=  3.220  target= 2.5
     REMARK rweight=  0.1000 (with wa= 2.58634)
     REMARK target= mlf   steps= 30
     REMARK sg= P3(2)21 a= 124.172 b= 124.172 c= 47.314 alpha= 90 beta= 90
     gamma= 120
15   REMARK parameter file 1  : /ddl/david/projects/MY_CNS/prot.par
     REMARK parameter file 2  : /ddl/david/projects/MY_CNS/sto.par
     REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
     REMARK parameter file 4  : CNS_TOPPAR:ion.param
     REMARK parameter file 5  : /ddl/david/projects/MY_CNS/glycerol.par
20   REMARK molecular structure file: ../generate/alternate.mtf
     REMARK input coordinates: ../minimize/minimize.pdb
     REMARK reflection file= ../../l/hkl/cns.hkl
     REMARK ncs= none
     REMARK B-correction resolution: 6.0 - 2.30
25   REMARK initial B-factor correction applied to fobs :
     REMARK   B11= -4.525 B22=  4.525 B33=   9.049
     REMARK   B12= -1.949 B13=   0.000 B23=   0.000
     REMARK B-factor correction applied to coordinate array B:  -0.209
     REMARK bulk solvent: density level= 0.340909 e/A^3, B-factor= 36.8807
30   A^2
     REMARK reflections with |Fobs/sigma_F < 0.0 rejected
     REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
     REMARK theoretical total number of refl. in resol. range:   18858 (
     100.0 % )
35   REMARK number of unobserved reflections (no entry or |F|=0):   846 (
     4.5 % )
     REMARK number of reflections rejected:                         0 (
     0.0 % )
     REMARK total number of reflections used:                   18012 (
40   95.5 % )
     REMARK number of reflections in working set:               17259 (
     91.5 % )
     REMARK number of reflections in test set:                    753 (
     4.0 % )
45   CRYST1  124.172  124.172   47.314  90.00  90.00 120.00 P 32 2 1
     REMARK FILENAME="bindividual.pdb"
     REMARK DATE:30-Jan-2003  19:44:02       created by user: david
     REMARK VERSION:1.0
     ATOM      1  CB  PRO A  72      64.267  -7.345  13.422  1.00 74.69 A
50   ATOM      2  CG  PRO A  72      63.278  -8.432  13.027  1.00 74.97 A
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     ATOM      4  O   PRO A  72      66.500  -6.002  10.955  1.00 73.74 A
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     ATOM      6  CD  PRO A  72      63.762  -8.901  11.640  1.00 75.33 A
55   ATOM      7  CA  PRO A  72      64.474  -6.639  12.090  1.00 74.30 A
     ATOM      8  N   GLN A  73      66.329  -5.474  13.141  1.00 72.17 A
     ATOM      9  CA  GLN A  73      67.635  -4.829  13.221  1.00 70.49 A
```

	ATOM	10	CB	GLN A	73	67.570	-3.424	12.611	1.00	69.71	A
	ATOM	11	CG	GLN A	73	66.670	-2.458	13.363	1.00	68.72	A
	ATOM	12	CD	GLN A	73	66.722	-1.054	12.795	0.00	69.01	A
	ATOM	13	OE1	GLN A	73	67.785	-0.435	12.735	0.00	68.92	A
5	ATOM	14	NE2	GLN A	73	65.571	-0.541	12.376	0.00	68.92	A
	ATOM	15	C	GLN A	73	68.057	-4.728	14.683	1.00	69.53	A
	ATOM	16	O	GLN A	73	67.267	-5.015	15.585	1.00	69.69	A
	ATOM	17	N	PRO A	74	69.313	-4.321	14.940	1.00	68.34	A
	ATOM	18	CD	PRO A	74	70.411	-4.026	13.999	1.00	67.68	A
10	ATOM	19	CA	PRO A	74	69.769	-4.204	16.330	1.00	67.15	A
	ATOM	20	CB	PRO A	74	71.198	-3.675	16.178	1.00	67.56	A
	ATOM	21	CG	PRO A	74	71.635	-4.254	14.855	1.00	67.46	A
	ATOM	22	C	PRO A	74	68.866	-3.240	17.105	1.00	65.27	A
	ATOM	23	O	PRO A	74	68.496	-2.186	16.584	1.00	65.27	A
15	ATOM	24	N	ARG A	75	68.506	-3.598	18.337	1.00	62.56	A
	ATOM	25	CA	ARG A	75	67.642	-2.730	19.136	1.00	59.53	A
	ATOM	26	CB	ARG A	75	67.543	-3.228	20.582	1.00	62.40	A
	ATOM	27	CG	ARG A	75	66.120	-3.565	21.023	1.00	64.22	A
	ATOM	28	CD	ARG A	75	66.020	-3.746	22.537	1.00	66.65	A
20	ATOM	29	NE	ARG A	75	64.741	-4.332	22.943	1.00	68.76	A
	ATOM	30	CZ	ARG A	75	64.390	-4.572	24.204	1.00	70.18	A
	ATOM	31	NH1	ARG A	75	65.218	-4.272	25.197	1.00	70.31	A
	ATOM	32	NH2	ARG A	75	63.213	-5.125	24.477	1.00	71.64	A
	ATOM	33	C	ARG A	75	68.184	-1.306	19.126	1.00	55.61	A
25	ATOM	34	O	ARG A	75	69.386	-1.082	18.961	1.00	55.58	A
	ATOM	35	N	LYS A	76	67.294	-0.341	19.295	1.00	45.50	A
	ATOM	36	CA	LYS A	76	67.704	1.050	19.297	1.00	45.50	A
	ATOM	37	CB	LYS A	76	66.498	1.941	19.594	1.00	45.42	A
	ATOM	38	CG	LYS A	76	66.404	3.192	18.735	1.00	45.70	A
30	ATOM	39	CD	LYS A	76	66.329	2.829	17.257	1.00	44.53	A
	ATOM	40	CE	LYS A	76	66.030	4.045	16.396	1.00	44.45	A
	ATOM	41	NZ	LYS A	76	66.091	3.733	14.939	1.00	43.30	A
	ATOM	42	C	LYS A	76	68.783	1.251	20.359	1.00	42.73	A
	ATOM	43	O	LYS A	76	68.715	0.681	21.447	1.00	42.46	A
35	ATOM	44	N	LYS A	77	69.793	2.046	20.038	1.00	39.63	A
	ATOM	45	CA	LYS A	77	70.851	2.309	20.995	1.00	36.33	A
	ATOM	46	CB	LYS A	77	72.139	2.670	20.267	1.00	36.33	A
	ATOM	47	CG	LYS A	77	72.655	1.570	19.353	1.00	36.55	A
	ATOM	48	CD	LYS A	77	74.005	1.945	18.785	1.00	35.61	A
40	ATOM	49	CE	LYS A	77	74.491	0.932	17.766	1.00	38.34	A
	ATOM	50	NZ	LYS A	77	74.706	-0.419	18.354	1.00	38.65	A
	ATOM	51	C	LYS A	77	70.413	3.459	21.889	1.00	35.52	A
	ATOM	52	O	LYS A	77	69.475	4.190	21.557	1.00	32.62	A
	ATOM	53	N	ARG A	78	71.097	3.608	23.020	1.00	34.95	A
45	ATOM	54	CA	ARG A	78	70.801	4.654	23.991	1.00	33.99	A
	ATOM	55	CB	ARG A	78	69.917	4.094	25.114	1.00	35.78	A
	ATOM	56	CG	ARG A	78	70.211	2.652	25.483	1.00	38.18	A
	ATOM	57	CD	ARG A	78	69.036	2.040	26.239	1.00	38.81	A
	ATOM	58	NE	ARG A	78	68.995	0.578	26.160	0.00	38.43	A
50	ATOM	59	CZ	ARG A	78	69.889	-0.232	26.719	0.00	38.44	A
	ATOM	60	NH1	ARG A	78	70.906	0.274	27.401	0.00	38.37	A
	ATOM	61	NH2	ARG A	78	69.760	-1.549	26.610	0.00	38.37	A
	ATOM	62	C	ARG A	78	72.099	5.230	24.544	1.00	31.96	A
	ATOM	63	O	ARG A	78	73.133	4.576	24.515	1.00	32.75	A
55	ATOM	64	N	PRO A	79	72.060	6.470	25.055	1.00	30.37	A
	ATOM	65	CD	PRO A	79	70.844	7.272	25.274	1.00	27.35	A
	ATOM	66	CA	PRO A	79	73.236	7.150	25.611	1.00	29.82	A
	ATOM	67	CB	PRO A	79	72.626	8.326	26.365	1.00	28.52	A
	ATOM	68	CG	PRO A	79	71.418	8.628	25.559	1.00	29.89	A

```
      ATOM     69  C    PRO A  79      74.129   6.298  26.510  1.00 30.92 A
      ATOM     70  O    PRO A  79      75.356   6.357  26.412  1.00 33.32 A
      ATOM     71  N    GLU A  80      73.516   5.510  27.383  1.00 29.85 A
      ATOM     72  CA   GLU A  80      74.273   4.677  28.300  1.00 31.98 A
  5   ATOM     73  CB   GLU A  80      73.327   3.941  29.242  1.00 34.31 A
      ATOM     74  CG   GLU A  80      72.697   2.710  28.622  1.00 41.92 A
      ATOM     75  CD   GLU A  80      71.205   2.626  28.872  1.00 44.52 A
      ATOM     76  OE1  GLU A  80      70.461   3.466  28.317  1.00 46.38 A
      ATOM     77  OE2  GLU A  80      70.780   1.721  29.625  1.00 46.03 A
 10   ATOM     78  C    GLU A  80      75.157   3.663  27.578  1.00 30.62 A
      ATOM     79  O    GLU A  80      76.101   3.144  28.170  1.00 30.21 A
      ATOM     80  N    ASP A  81      74.859   3.378  26.312  1.00 28.14 A
      ATOM     81  CA   ASP A  81      75.659   2.417  25.548  1.00 27.32 A
      ATOM     82  CB   ASP A  81      74.938   1.990  24.253  1.00 27.75 A
 15   ATOM     83  CG   ASP A  81      73.612   1.275  24.512  1.00 30.45 A
      ATOM     84  OD1  ASP A  81      73.495   0.549  25.525  1.00 30.76 A
      ATOM     85  OD2  ASP A  81      72.686   1.424  23.686  1.00 30.74 A
      ATOM     86  C    ASP A  81      77.026   2.990  25.166  1.00 26.35 A
      ATOM     87  O    ASP A  81      77.895   2.266  24.680  1.00 25.33 A
 20   ATOM     88  N    PHE A  82      77.217   4.283  25.404  1.00 24.95 A
      ATOM     89  CA   PHE A  82      78.457   4.948  25.035  1.00 23.57 A
      ATOM     90  CB   PHE A  82      78.168   6.040  23.991  1.00 23.02 A
      ATOM     91  CG   PHE A  82      77.507   5.534  22.742  1.00 23.64 A
      ATOM     92  CD1  PHE A  82      78.270   5.059  21.680  1.00 23.15 A
 25   ATOM     93  CD2  PHE A  82      76.123   5.504  22.640  1.00 23.41 A
      ATOM     94  CE1  PHE A  82      77.670   4.559  20.540  1.00 23.43 A
      ATOM     95  CE2  PHE A  82      75.504   5.003  21.498  1.00 24.29 A
      ATOM     96  CZ   PHE A  82      76.283   4.527  20.444  1.00 25.15 A
      ATOM     97  C    PHE A  82      79.199   5.609  26.186  1.00 24.39 A
 30   ATOM     98  O    PHE A  82      78.647   5.847  27.259  1.00 22.78 A
      ATOM     99  N    LYS A  83      80.471   5.896  25.932  1.00 22.40 A
      ATOM    100  CA   LYS A  83      81.294   6.615  26.869  1.00 23.38 A
      ATOM    101  CB   LYS A  83      82.554   5.834  27.250  1.00 24.29 A
      ATOM    102  CG   LYS A  83      83.453   6.594  28.227  1.00 27.32 A
 35   ATOM    103  CD   LYS A  83      84.411   5.675  28.988  1.00 31.40 A
      ATOM    104  CE   LYS A  83      85.321   4.906  28.044  1.00 30.06 A
      ATOM    105  NZ   LYS A  83      86.145   5.819  27.207  0.00 30.54 A
      ATOM    106  C    LYS A  83      81.656   7.847  26.046  1.00 24.47 A
      ATOM    107  O    LYS A  83      82.518   7.787  25.162  1.00 26.09 A
 40   ATOM    108  N    PHE A  84      80.965   8.951  26.309  1.00 21.59 A
      ATOM    109  CA   PHE A  84      81.211  10.182  25.583  1.00 21.61 A
      ATOM    110  CB   PHE A  84      80.073  11.169  25.811  1.00 20.62 A
      ATOM    111  CG   PHE A  84      78.794  10.757  25.159  1.00 20.05 A
      ATOM    112  CD1  PHE A  84      77.915   9.905  25.805  1.00 18.27 A
 45   ATOM    113  CD2  PHE A  84      78.498  11.176  23.868  1.00 19.96 A
      ATOM    114  CE1  PHE A  84      76.764   9.473  25.183  1.00 19.47 A
      ATOM    115  CE2  PHE A  84      77.346  10.748  23.233  1.00 21.09 A
      ATOM    116  CZ   PHE A  84      76.475   9.894  23.890  1.00 20.64 A
      ATOM    117  C    PHE A  84      82.525  10.820  25.966  1.00 22.27 A
 50   ATOM    118  O    PHE A  84      82.900  10.822  27.129  1.00 24.09 A
      ATOM    119  N    GLY A  85      83.213  11.371  24.972  1.00 22.72 A
      ATOM    120  CA   GLY A  85      84.496  12.007  25.203  1.00 22.66 A
      ATOM    121  C    GLY A  85      84.540  13.481  24.839  1.00 22.72 A
      ATOM    122  O    GLY A  85      83.622  14.228  25.158  1.00 22.51 A
 55   ATOM    123  N    LYS A  86      85.608  13.894  24.162  1.00 22.49 A
      ATOM    124  CA   LYS A  86      85.794  15.291  23.784  1.00 22.53 A
      ATOM    125  CB   LYS A  86      87.238  15.530  23.333  1.00 24.44 A
      ATOM    126  CG   LYS A  86      87.617  14.804  22.051  1.00 26.94 A
      ATOM    127  CD   LYS A  86      89.033  15.120  21.594  1.00 29.52 A
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      ATOM    128  CE   LYS A  86        89.166  16.571  21.154  1.00 35.93 A
      ATOM    129  NZ   LYS A  86        90.505  16.892  20.553  1.00 38.21 A
      ATOM    130  C    LYS A  86        84.857  15.798  22.699  1.00 23.09 A
      ATOM    131  O    LYS A  86        84.295  15.032  21.923  1.00 22.85 A
   5  ATOM    132  N    ILE A  87        84.702  17.114  22.664  1.00 22.28 A
      ATOM    133  CA   ILE A  87        83.867  17.780  21.683  1.00 21.22 A
      ATOM    134  CB   ILE A  87        83.429  19.170  22.204  1.00 22.05 A
      ATOM    135  CG2  ILE A  87        82.792  19.993  21.076  1.00 17.65 A
      ATOM    136  CG1  ILE A  87        82.493  18.998  23.406  1.00 21.65 A
  10  ATOM    137  CD1  ILE A  87        82.159  20.300  24.118  1.00 18.47 A
      ATOM    138  C    ILE A  87        84.707  17.963  20.418  1.00 21.83 A
      ATOM    139  O    ILE A  87        85.782  18.543  20.470  1.00 21.99 A
      ATOM    140  N    LEU A  88        84.226  17.463  19.288  1.00 22.57 A
      ATOM    141  CA   LEU A  88        84.964  17.614  18.039  1.00 22.76 A
  15  ATOM    142  CB   LEU A  88        84.586  16.515  17.044  1.00 20.65 A
      ATOM    143  CG   LEU A  88        84.899  15.107  17.535  1.00 20.09 A
      ATOM    144  CD1  LEU A  88        84.455  14.082  16.502  1.00 17.42 A
      ATOM    145  CD2  LEU A  88        86.392  15.004  17.813  1.00 17.75 A
      ATOM    146  C    LEU A  88        84.657  18.964  17.428  1.00 23.53 A
  20  ATOM    147  O    LEU A  88        85.512  19.577  16.794  1.00 24.73 A
      ATOM    148  N    GLY A  89        83.430  19.428  17.619  1.00 24.20 A
      ATOM    149  CA   GLY A  89        83.057  20.710  17.062  1.00 28.37 A
      ATOM    150  C    GLY A  89        81.649  21.131  17.431  1.00 32.57 A
      ATOM    151  O    GLY A  89        80.834  20.318  17.882  1.00 32.78 A
  25  ATOM    152  N    GLU A  90        81.363  22.412  17.224  1.00 35.17 A
      ATOM    153  CA   GLU A  90        80.063  22.964  17.542  1.00 39.17 A
      ATOM    154  CB   GLU A  90        80.168  23.853  18.784  1.00 41.47 A
      ATOM    155  CG   GLU A  90        80.112  23.061  20.082  1.00 47.18 A
      ATOM    156  CD   GLU A  90        80.422  23.893  21.313  1.00 50.49 A
  30  ATOM    157  OE1  GLU A  90        81.610  24.228  21.526  1.00 51.41 A
      ATOM    158  OE2  GLU A  90        79.476  24.210  22.067  1.00 53.44 A
      ATOM    159  C    GLU A  90        79.436  23.743  16.402  1.00 40.69 A
      ATOM    160  O    GLU A  90        80.110  24.185  15.471  1.00 40.64 A
      ATOM    161  N    GLY A  91        78.121  23.881  16.488  1.00 42.58 A
  35  ATOM    162  CA   GLY A  91        77.363  24.618  15.503  1.00 43.40 A
      ATOM    163  C    GLY A  91        76.303  25.335  16.306  1.00 44.83 A
      ATOM    164  O    GLY A  91        76.154  25.083  17.507  1.00 43.64 A
      ATOM    165  N    SER A  92        75.579  26.244  15.669  1.00 47.22 A
      ATOM    166  CA   SER A  92        74.522  26.969  16.366  1.00 48.94 A
  40  ATOM    167  CB   SER A  92        73.961  28.066  15.461  1.00 51.50 A
      ATOM    168  OG   SER A  92        73.663  27.541  14.175  1.00 54.98 A
      ATOM    169  C    SER A  92        73.454  25.928  16.625  1.00 47.87 A
      ATOM    170  O    SER A  92        72.745  25.950  17.635  1.00 47.78 A
      ATOM    171  N    PHE A  93        73.392  24.994  15.689  1.00 46.49 A
  45  ATOM    172  CA   PHE A  93        72.434  23.909  15.697  1.00 46.02 A
      ATOM    173  CB   PHE A  93        72.297  23.369  14.263  1.00 49.54 A
      ATOM    174  CG   PHE A  93        73.588  23.398  13.459  1.00 50.29 A
      ATOM    175  CD1  PHE A  93        74.301  22.229  13.209  1.00 52.29 A
      ATOM    176  CD2  PHE A  93        74.058  24.593  12.915  1.00 51.94 A
  50  ATOM    177  CE1  PHE A  93        75.459  22.245  12.424  1.00 52.28 A
      ATOM    178  CE2  PHE A  93        75.209  24.622  12.135  1.00 52.58 A
      ATOM    179  CZ   PHE A  93        75.911  23.443  11.887  1.00 53.99 A
      ATOM    180  C    PHE A  93        72.700  22.754  16.662  1.00 43.48 A
      ATOM    181  O    PHE A  93        71.772  22.245  17.292  1.00 42.15 A
  55  ATOM    182  N    SER A  94        73.955  22.343  16.796  1.00 39.99 A
      ATOM    183  CA   SER A  94        74.245  21.206  17.655  1.00 36.12 A
      ATOM    184  CB   SER A  94        73.839  19.937  16.921  1.00 38.79 A
      ATOM    185  OG   SER A  94        74.549  19.863  15.695  1.00 40.39 A
      ATOM    186  C    SER A  94        75.697  21.066  18.083  1.00 32.29 A
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      ATOM    187  O    SER A   94       76.513  21.962  17.890  1.00 30.04 A
      ATOM    188  N    THR A   95       76.006  19.909  18.655  1.00 28.50 A
      ATOM    189  CA   THR A   95       77.350  19.614  19.116  1.00 26.86 A
      ATOM    190  CB   THR A   95       77.432  19.642  20.652  1.00 27.90 A
   5  ATOM    191  OG1  THR A   95       76.907  20.882  21.136  1.00 32.56 A
      ATOM    192  CG2  THR A   95       78.874  19.502  21.112  1.00 27.77 A
      ATOM    193  C    THR A   95       77.757  18.225  18.653  1.00 23.70 A
      ATOM    194  O    THR A   95       76.971  17.287  18.724  1.00 24.35 A
      ATOM    195  N    VAL A   96       78.991  18.100  18.184  1.00 22.75 A
  10  ATOM    196  CA   VAL A   96       79.505  16.813  17.733  1.00 20.60 A
      ATOM    197  CB   VAL A   96       80.139  16.909  16.336  1.00 17.79 A
      ATOM    198  CG1  VAL A   96       80.625  15.530  15.898  1.00 18.21 A
      ATOM    199  CG2  VAL A   96       79.131  17.447  15.344  1.00 13.79 A
      ATOM    200  C    VAL A   96       80.566  16.351  18.716  1.00 21.23 A
  15  ATOM    201  O    VAL A   96       81.600  17.006  18.889  1.00 22.12 A
      ATOM    202  N    VAL A   97       80.310  15.220  19.362  1.00 22.83 A
      ATOM    203  CA   VAL A   97       81.244  14.690  20.345  1.00 24.07 A
      ATOM    204  CB   VAL A   97       80.592  14.680  21.743  1.00 24.91 A
      ATOM    205  CG1  VAL A   97       79.199  14.124  21.649  1.00 28.97 A
  20  ATOM    206  CG2  VAL A   97       81.422  13.859  22.715  1.00 27.97 A
      ATOM    207  C    VAL A   97       81.748  13.298  20.002  1.00 23.47 A
      ATOM    208  O    VAL A   97       81.017  12.491  19.436  1.00 26.62 A
      ATOM    209  N    LEU A   98       83.007  13.024  20.329  1.00 22.92 A
      ATOM    210  CA   LEU A   98       83.586  11.713  20.063  1.00 23.27 A
  25  ATOM    211  CB   LEU A   98       85.117  11.777  20.110  1.00 21.94 A
      ATOM    212  CG   LEU A   98       85.932  10.495  19.854  1.00 22.83 A
      ATOM    213  CD1  LEU A   98       85.606   9.924  18.486  1.00 23.24 A
      ATOM    214  CD2  LEU A   98       87.422  10.802  19.945  1.00 21.21 A
      ATOM    215  C    LEU A   98       83.069  10.782  21.144  1.00 23.95 A
  30  ATOM    216  O    LEU A   98       83.143  11.099  22.322  1.00 26.02 A
      ATOM    217  N    ALA A   99       82.523   9.645  20.738  1.00 24.41 A
      ATOM    218  CA   ALA A   99       81.999   8.677  21.686  1.00 23.76 A
      ATOM    219  CB   ALA A   99       80.485   8.692  21.668  1.00 20.64 A
      ATOM    220  C    ALA A   99       82.502   7.282  21.357  1.00 26.42 A
  35  ATOM    221  O    ALA A   99       82.792   6.951  20.195  1.00 26.78 A
      ATOM    222  N    ARG A  100       82.602   6.462  22.394  1.00 26.77 A
      ATOM    223  CA   ARG A  100       83.055   5.094  22.238  1.00 26.80 A
      ATOM    224  CB   ARG A  100       84.362   4.897  23.001  1.00 28.29 A
      ATOM    225  CG   ARG A  100       84.967   3.522  22.853  1.00 33.87 A
  40  ATOM    226  CD   ARG A  100       86.281   3.447  23.617  1.00 38.01 A
      ATOM    227  NE   ARG A  100       87.337   4.240  22.983  1.00 41.22 A
      ATOM    228  CZ   ARG A  100       87.932   3.917  21.837  1.00 41.46 A
      ATOM    229  NH1  ARG A  100       87.580   2.813  21.190  1.00 41.22 A
      ATOM    230  NH2  ARG A  100       88.887   4.692  21.339  1.00 43.39 A
  45  ATOM    231  C    ARG A  100       81.970   4.167  22.770  1.00 24.32 A
      ATOM    232  O    ARG A  100       81.583   4.251  23.934  1.00 25.42 A
      ATOM    233  N    GLU A  101       81.456   3.308  21.900  1.00 22.41 A
      ATOM    234  CA   GLU A  101       80.417   2.367  22.281  1.00 22.87 A
      ATOM    235  CB   GLU A  101       79.787   1.775  21.025  1.00 21.96 A
  50  ATOM    236  CG   GLU A  101       78.819   0.652  21.292  1.00 24.68 A
      ATOM    237  CD   GLU A  101       78.203   0.137  20.018  1.00 28.92 A
      ATOM    238  OE1  GLU A  101       78.965  -0.113  19.057  1.00 28.96 A
      ATOM    239  OE2  GLU A  101       76.963  -0.022  19.971  1.00 29.67 A
      ATOM    240  C    GLU A  101       81.015   1.261  23.151  1.00 23.59 A
  55  ATOM    241  O    GLU A  101       81.945   0.574  22.738  1.00 24.80 A
      ATOM    242  N    LEU A  102       80.475   1.088  24.351  1.00 26.09 A
      ATOM    243  CA   LEU A  102       80.982   0.083  25.289  1.00 28.74 A

      ATOM    244  CB   LEU A  102       80.173   0.110  26.593  1.00 30.16 A
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	ATOM	245	CG	LEU A 102	80.347	1.308	27.532	1.00 34.19 A
	ATOM	246	CD1	LEU A 102	81.824	1.692	27.599	1.00 33.27 A
	ATOM	247	CD2	LEU A 102	79.527	2.477	27.046	1.00 34.46 A
	ATOM	248	C	LEU A 102	81.042	-1.359	24.791	1.00 28.32 A
5	ATOM	249	O	LEU A 102	82.067	-2.024	24.916	1.00 29.83 A
	ATOM	250	N	ALA A 103	79.948	-1.841	24.226	1.00 27.34 A
	ATOM	251	CA	ALA A 103	79.887	-3.218	23.763	1.00 27.81 A
	ATOM	252	CB	ALA A 103	78.466	-3.549	23.367	1.00 27.48 A
	ATOM	253	C	ALA A 103	80.828	-3.593	22.624	1.00 27.42 A
10	ATOM	254	O	ALA A 103	81.172	-4.765	22.463	1.00 28.68 A
	ATOM	255	N	THR A 104	81.257	-2.612	21.842	1.00 24.97 A
	ATOM	256	CA	THR A 104	82.105	-2.907	20.695	1.00 23.79 A
	ATOM	257	CB	THR A 104	81.441	-2.472	19.393	1.00 22.01 A
	ATOM	258	OG1	THR A 104	81.355	-1.041	19.379	1.00 23.91 A
15	ATOM	259	CG2	THR A 104	80.051	-3.069	19.261	1.00 17.30 A
	ATOM	260	C	THR A 104	83.444	-2.221	20.712	1.00 25.00 A
	ATOM	261	O	THR A 104	84.350	-2.616	19.972	1.00 25.02 A
	ATOM	262	N	SER A 105	83.551	-1.172	21.525	1.00 24.55 A
	ATOM	263	CA	SER A 105	84.775	-0.394	21.616	1.00 24.55 A
20	ATOM	264	CB	SER A 105	85.979	-1.334	21.732	1.00 26.36 A
	ATOM	265	OG	SER A 105	87.143	-0.621	22.090	1.00 32.45 A
	ATOM	266	C	SER A 105	84.916	0.514	20.374	1.00 23.38 A
	ATOM	267	O	SER A 105	85.931	1.175	20.188	1.00 24.92 A
	ATOM	268	N	ARG A 106	83.888	0.546	19.531	1.00 20.57 A
25	ATOM	269	CA	ARG A 106	83.906	1.372	18.323	1.00 19.31 A
	ATOM	270	CB	ARG A 106	82.778	0.947	17.370	1.00 19.05 A
	ATOM	271	CG	ARG A 106	83.099	-0.283	16.520	1.00 15.69 A
	ATOM	272	CD	ARG A 106	81.853	-0.804	15.832	1.00 19.45 A
	ATOM	273	NE	ARG A 106	82.144	-1.838	14.846	1.00 20.98 A
30	ATOM	274	CZ	ARG A 106	81.234	-2.673	14.354	1.00 21.77 A
	ATOM	275	NH1	ARG A 106	79.974	-2.599	14.768	1.00 19.65 A
	ATOM	276	NH2	ARG A 106	81.577	-3.560	13.427	1.00 21.43 A
	ATOM	277	C	ARG A 106	83.760	2.858	18.624	1.00 17.84 A
	ATOM	278	O	ARG A 106	83.022	3.234	19.525	1.00 15.87 A
35	ATOM	279	N	GLU A 107	84.463	3.691	17.863	1.00 18.23 A
	ATOM	280	CA	GLU A 107	84.395	5.144	18.039	1.00 22.75 A
	ATOM	281	CB	GLU A 107	85.773	5.800	17.929	1.00 23.58 A
	ATOM	282	CG	GLU A 107	86.828	5.254	18.859	1.00 32.15 A
	ATOM	283	CD	GLU A 107	88.066	6.131	18.878	1.00 35.04 A
40	ATOM	284	OE1	GLU A 107	88.145	7.019	19.755	1.00 36.99 A
	ATOM	285	OE2	GLU A 107	88.949	5.944	18.007	1.00 37.54 A
	ATOM	286	C	GLU A 107	83.514	5.787	16.982	1.00 21.00 A
	ATOM	287	O	GLU A 107	83.709	5.577	15.787	1.00 21.37 A
	ATOM	288	N	TYR A 108	82.570	6.593	17.437	1.00 19.48 A
45	ATOM	289	CA	TYR A 108	81.652	7.298	16.559	1.00 18.30 A
	ATOM	290	CB	TYR A 108	80.228	6.791	16.754	1.00 17.52 A
	ATOM	291	CG	TYR A 108	79.993	5.373	16.309	1.00 22.75 A
	ATOM	292	CD1	TYR A 108	79.727	5.075	14.972	1.00 20.94 A
	ATOM	293	CE1	TYR A 108	79.492	3.765	14.571	1.00 23.91 A
50	ATOM	294	CD2	TYR A 108	80.019	4.324	17.231	1.00 19.41 A
	ATOM	295	CE2	TYR A 108	79.788	3.026	16.845	1.00 19.33 A
	ATOM	296	CZ	TYR A 108	79.527	2.744	15.521	1.00 23.13 A
	ATOM	297	OH	TYR A 108	79.333	1.438	15.143	1.00 23.59 A
	ATOM	298	C	TYR A 108	81.660	8.777	16.906	1.00 18.00 A
55	ATOM	299	O	TYR A 108	81.929	9.161	18.046	1.00 18.12 A
	ATOM	300	N	ALA A 109	81.370	9.603	15.912	1.00 17.20 A
	ATOM	301	CA	ALA A 109	81.274	11.036	16.114	1.00 15.30 A
	ATOM	302	CB	ALA A 109	81.853	11.784	14.928	1.00 13.44 A
	ATOM	303	C	ALA A 109	79.759	11.205	16.178	1.00 17.20 A

ATOM	304	O	ALA A 109	79.056	11.019	15.179	1.00	17.23	A
ATOM	305	N	ILE A 110	79.250	11.522	17.362	1.00	17.40	A
ATOM	306	CA	ILE A 110	77.814	11.654	17.542	1.00	17.60	A
ATOM	307	CB	ILE A 110	77.380	10.957	18.842	1.00	16.56	A
ATOM	308	CG2	ILE A 110	75.906	11.236	19.119	1.00	14.97	A
ATOM	309	CG1	ILE A 110	77.672	9.453	18.728	1.00	14.02	A
ATOM	310	CD1	ILE A 110	77.197	8.632	19.907	1.00	11.93	A
ATOM	311	C	ILE A 110	77.306	13.089	17.548	1.00	19.83	A
ATOM	312	O	ILE A 110	77.690	13.892	18.396	1.00	20.84	A
ATOM	313	N	LYS A 111	76.444	13.415	16.597	1.00	18.58	A
ATOM	314	CA	LYS A 111	75.902	14.761	16.551	1.00	20.88	A
ATOM	315	CB	LYS A 111	75.455	15.115	15.131	1.00	21.39	A
ATOM	316	CG	LYS A 111	75.016	16.558	14.975	1.00	24.84	A
ATOM	317	CD	LYS A 111	75.005	16.971	13.516	1.00	27.43	A
ATOM	318	CE	LYS A 111	74.426	18.359	13.343	1.00	28.44	A
ATOM	319	NZ	LYS A 111	74.619	18.871	11.972	1.00	28.27	A
ATOM	320	C	LYS A 111	74.724	14.819	17.507	1.00	20.66	A
ATOM	321	O	LYS A 111	73.797	14.008	17.410	1.00	20.23	A
ATOM	322	N	ILE A 112	74.772	15.765	18.441	1.00	20.09	A
ATOM	323	CA	ILE A 112	73.704	15.914	19.426	1.00	23.02	A
ATOM	324	CB	ILE A 112	74.261	15.882	20.863	1.00	24.20	A
ATOM	325	CG2	ILE A 112	73.116	15.765	21.864	1.00	21.42	A
ATOM	326	CG1	ILE A 112	75.206	14.692	21.023	1.00	24.14	A
ATOM	327	CD1	ILE A 112	75.893	14.634	22.375	1.00	26.83	A
ATOM	328	C	ILE A 112	72.962	17.225	19.221	1.00	22.53	A
ATOM	329	O	ILE A 112	73.573	18.286	19.132	1.00	21.31	A
ATOM	330	N	LEU A 113	71.641	17.138	19.150	1.00	24.04	A
ATOM	331	CA	LEU A 113	70.800	18.313	18.940	1.00	25.81	A
ATOM	332	CB	LEU A 113	70.135	18.264	17.555	1.00	24.66	A
ATOM	333	CG	LEU A 113	70.988	18.095	16.295	1.00	26.73	A
ATOM	334	CD1	LEU A 113	71.316	16.620	16.093	1.00	24.51	A
ATOM	335	CD2	LEU A 113	70.234	18.637	15.083	1.00	26.16	A
ATOM	336	C	LEU A 113	69.702	18.400	19.994	1.00	27.62	A
ATOM	337	O	LEU A 113	69.053	17.398	20.314	1.00	29.70	A
ATOM	338	N	GLU A 114	69.491	19.597	20.530	1.00	29.32	A
ATOM	339	CA	GLU A 114	68.445	19.806	21.526	1.00	31.56	A
ATOM	340	CB	GLU A 114	68.775	21.020	22.391	1.00	34.85	A
ATOM	341	CG	GLU A 114	67.680	21.357	23.392	1.00	42.32	A
ATOM	342	CD	GLU A 114	67.922	22.670	24.108	1.00	45.56	A
ATOM	343	OE1	GLU A 114	68.086	23.700	23.417	1.00	48.01	A
ATOM	344	OE2	GLU A 114	67.941	22.673	25.359	1.00	48.10	A
ATOM	345	C	GLU A 114	67.107	20.036	20.816	1.00	31.02	A
ATOM	346	O	GLU A 114	66.926	21.049	20.140	1.00	30.39	A
ATOM	347	N	LYS A 115	66.176	19.099	20.967	1.00	30.58	A
ATOM	348	CA	LYS A 115	64.872	19.218	20.321	1.00	31.63	A
ATOM	349	CB	LYS A 115	63.964	18.049	20.734	1.00	28.91	A
ATOM	350	CG	LYS A 115	64.287	16.742	20.003	1.00	28.07	A
ATOM	351	CD	LYS A 115	63.356	15.580	20.368	1.00	23.95	A
ATOM	352	CE	LYS A 115	63.713	14.960	21.707	1.00	23.89	A
ATOM	353	NZ	LYS A 115	62.860	13.782	22.020	1.00	24.15	A
ATOM	354	C	LYS A 115	64.165	20.551	20.591	1.00	33.78	A
ATOM	355	O	LYS A 115	63.495	21.100	19.711	1.00	33.61	A
ATOM	356	N	ARG A 116	64.325	21.076	21.801	1.00	35.55	A
ATOM	357	CA	ARG A 116	63.682	22.332	22.176	1.00	38.66	A
ATOM	358	CB	ARG A 116	63.932	22.627	23.663	1.00	42.20	A
ATOM	359	CG	ARG A 116	62.949	23.603	24.302	1.00	47.35	A
ATOM	360	CD	ARG A 116	63.670	24.685	25.109	1.00	52.44	A
ATOM	361	NE	ARG A 116	64.526	24.141	26.166	1.00	56.30	A
ATOM	362	CZ	ARG A 116	64.142	23.920	27.423	1.00	57.97	A

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      ATOM    363   NH1  ARG A 116      62.899  24.199  27.808  1.00 58.89 A
      ATOM    364   NH2  ARG A 116      65.006  23.420  28.300  1.00 56.55 A
      ATOM    365   C    ARG A 116      64.227  23.472  21.323  1.00 37.67 A
      ATOM    366   O    ARG A 116      63.474  24.246  20.735  1.00 36.66 A
   5  ATOM    367   N    HIS A 117      65.550  23.555  21.259  1.00 37.78 A
      ATOM    368   CA   HIS A 117      66.236  24.590  20.501  1.00 35.88 A
      ATOM    369   CB   HIS A 117      67.744  24.417  20.676  1.00 35.60 A
      ATOM    370   CG   HIS A 117      68.560  25.532  20.101  1.00 37.06 A
      ATOM    371   CD2  HIS A 117      69.508  25.535  19.134  1.00 38.11 A
  10  ATOM    372   ND1  HIS A 117      68.469  26.831  20.550  1.00 37.56 A
      ATOM    373   CE1  HIS A 117      69.325  27.587  19.886  1.00 38.35 A
      ATOM    374   NE2  HIS A 117      69.969  26.825  19.021  1.00 38.67 A
      ATOM    375   C    HIS A 117      65.859  24.529  19.024  1.00 34.83 A
      ATOM    376   O    HIS A 117      65.600  25.554  18.398  1.00 35.80 A
  15  ATOM    377   N    ILE A 118      65.827  23.321  18.474  1.00 33.01 A
      ATOM    378   CA   ILE A 118      65.483  23.122  17.071  1.00 32.12 A
      ATOM    379   CB   ILE A 118      65.575  21.629  16.692  1.00 33.37 A
      ATOM    380   CG2  ILE A 118      64.968  21.398  15.312  1.00 33.44 A
      ATOM    381   CG1  ILE A 118      67.032  21.168  16.732  1.00 33.47 A
  20  ATOM    382   CD1  ILE A 118      67.195  19.685  16.479  1.00 35.01 A
      ATOM    383   C    ILE A 118      64.066  23.603  16.760  1.00 31.17 A
      ATOM    384   O    ILE A 118      63.838  24.295  15.774  1.00 29.39 A
      ATOM    385   N    ILE A 119      63.117  23.209  17.600  1.00 31.17 A
      ATOM    386   CA   ILE A 119      61.725  23.590  17.420  1.00 31.73 A
  25  ATOM    387   CB   ILE A 119      60.841  22.896  18.473  1.00 31.45 A
      ATOM    388   CG2  ILE A 119      59.471  23.560  18.548  1.00 26.98 A
      ATOM    389   CG1  ILE A 119      60.735  21.409  18.131  1.00 27.55 A
      ATOM    390   CD1  ILE A 119      60.092  20.574  19.205  1.00 26.52 A
      ATOM    391   C    ILE A 119      61.549  25.100  17.519  1.00 33.53 A
  30  ATOM    392   O    ILE A 119      60.879  25.714  16.688  1.00 32.81 A
      ATOM    393   N    ALA A 120      62.165  25.691  18.535  1.00 34.30 A
      ATOM    394   CA   ALA A 120      62.078  27.125  18.749  1.00 34.63 A
      ATOM    395   CB   ALA A 120      62.811  27.506  20.029  1.00 35.03 A
      ATOM    396   C    ALA A 120      62.657  27.889  17.574  1.00 35.68 A
  35  ATOM    397   O    ALA A 120      62.141  28.938  17.195  1.00 36.85 A
      ATOM    398   N    GLU A 121      63.732  27.369  16.995  1.00 35.66 A
      ATOM    399   CA   GLU A 121      64.375  28.041  15.870  1.00 36.43 A
      ATOM    400   CB   GLU A 121      65.873  27.726  15.864  1.00 40.99 A
      ATOM    401   CG   GLU A 121      66.637  28.166  17.116  1.00 45.01 A
  40  ATOM    402   CD   GLU A 121      66.844  29.676  17.205  1.00 48.12 A
      ATOM    403   OE1  GLU A 121      67.670  30.104  18.043  1.00 49.49 A
      ATOM    404   OE2  GLU A 121      66.188  30.433  16.451  1.00 49.20 A
      ATOM    405   C    GLU A 121      63.780  27.670  14.512  1.00 34.98 A
      ATOM    406   O    GLU A 121      64.282  28.105  13.480  1.00 34.50 A
  45  ATOM    407   N    ASN A 122      62.716  26.869  14.517  1.00 33.68 A
      ATOM    408   CA   ASN A 122      62.060  26.434  13.286  1.00 32.99 A
      ATOM    409   CB   ASN A 122      61.492  27.639  12.530  1.00 35.58 A
      ATOM    410   CG   ASN A 122      60.424  28.373  13.315  1.00 38.88 A
      ATOM    411   OD1  ASN A 122      60.717  29.154  14.227  1.00 38.30 A
  50  ATOM    412   ND2  ASN A 122      59.170  28.116  12.970  1.00 38.77 A
      ATOM    413   C    ASN A 122      63.024  25.679  12.367  1.00 31.80 A
      ATOM    414   O    ASN A 122      63.095  25.957  11.172  1.00 30.78 A
      ATOM    415   N    LYS A 123      63.754  24.716  12.919  1.00 29.87 A
      ATOM    416   CA   LYS A 123      64.717  23.966  12.120  1.00 29.87 A
  55  ATOM    417   CB   LYS A 123      66.100  24.016  12.775  1.00 30.75 A
      ATOM    418   CG   LYS A 123      66.669  25.406  12.895  1.00 33.94 A
      ATOM    419   CD   LYS A 123      66.810  26.049  11.527  1.00 37.59 A
      ATOM    420   CE   LYS A 123      67.354  27.466  11.646  1.00 39.07 A
      ATOM    421   NZ   LYS A 123      67.460  28.121  10.310  1.00 41.71 A
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	ATOM	422	C	LYS A 123	64.337	22.514	11.880	1.00	27.38 A
	ATOM	423	O	LYS A 123	65.139	21.745	11.355	1.00	24.93 A
	ATOM	424	N	VAL A 124	63.124	22.132	12.260	1.00	24.22 A
	ATOM	425	CA	VAL A 124	62.716	20.756	12.062	1.00	22.73 A
5	ATOM	426	CB	VAL A 124	61.235	20.559	12.416	1.00	22.36 A
	ATOM	427	CG1	VAL A 124	60.794	19.146	12.064	1.00	22.84 A
	ATOM	428	CG2	VAL A 124	61.031	20.802	13.905	1.00	20.63 A
	ATOM	429	C	VAL A 124	62.981	20.320	10.623	1.00	23.50 A
	ATOM	430	O	VAL A 124	63.633	19.297	10.385	1.00	21.86 A
10	ATOM	431	N	PRO A 125	62.512	21.109	9.639	1.00	23.91 A
	ATOM	432	CD	PRO A 125	61.806	22.399	9.725	1.00	24.52 A
	ATOM	433	CA	PRO A 125	62.737	20.736	8.239	1.00	24.57 A
	ATOM	434	CB	PRO A 125	62.147	21.914	7.464	1.00	23.69 A
	ATOM	435	CG	PRO A 125	61.098	22.450	8.400	1.00	25.18 A
15	ATOM	436	C	PRO A 125	64.217	20.520	7.923	1.00	23.84 A
	ATOM	437	O	PRO A 125	64.568	19.618	7.172	1.00	22.92 A
	ATOM	438	N	TYR A 126	65.073	21.353	8.501	1.00	24.86 A
	ATOM	439	CA	TYR A 126	66.511	21.259	8.274	1.00	28.10 A
	ATOM	440	CB	TYR A 126	67.202	22.494	8.859	1.00	32.76 A
20	ATOM	441	CG	TYR A 126	66.802	23.766	8.146	1.00	39.46 A
	ATOM	442	CD1	TYR A 126	67.466	24.179	6.987	1.00	42.04 A
	ATOM	443	CE1	TYR A 126	67.063	25.322	6.292	1.00	43.67 A
	ATOM	444	CD2	TYR A 126	65.722	24.531	8.597	1.00	42.16 A
	ATOM	445	CE2	TYR A 126	65.309	25.673	7.909	1.00	43.70 A
25	ATOM	446	CZ	TYR A 126	65.983	26.062	6.758	1.00	44.51 A
	ATOM	447	OH	TYR A 126	65.570	27.183	6.068	1.00	45.30 A
	ATOM	448	C	TYR A 126	67.115	19.984	8.852	1.00	26.14 A
	ATOM	449	O	TYR A 126	67.768	19.225	8.141	1.00	26.15 A
	ATOM	450	N	VAL A 127	66.891	19.756	10.141	1.00	24.35 A
30	ATOM	451	CA	VAL A 127	67.396	18.568	10.819	1.00	24.93 A
	ATOM	452	CB	VAL A 127	66.956	18.568	12.296	1.00	24.24 A
	ATOM	453	CG1	VAL A 127	67.444	17.316	12.997	1.00	23.36 A
	ATOM	454	CG2	VAL A 127	67.492	19.809	12.979	1.00	21.11 A
	ATOM	455	C	VAL A 127	66.894	17.290	10.130	1.00	25.81 A
35	ATOM	456	O	VAL A 127	67.655	16.351	9.903	1.00	25.79 A
	ATOM	457	N	THR A 128	65.612	17.273	9.793	1.00	25.57 A
	ATOM	458	CA	THR A 128	64.996	16.136	9.114	1.00	26.36 A
	ATOM	459	CB	THR A 128	63.486	16.384	8.908	1.00	25.21 A
	ATOM	460	OG1	THR A 128	62.827	16.390	10.181	1.00	29.29 A
40	ATOM	461	CG2	THR A 128	62.883	15.317	8.043	1.00	25.73 A
	ATOM	462	C	THR A 128	65.640	15.898	7.748	1.00	26.97 A
	ATOM	463	O	THR A 128	65.929	14.760	7.366	1.00	25.68 A
	ATOM	464	N	ARG A 129	65.854	16.980	7.012	1.00	27.23 A
	ATOM	465	CA	ARG A 129	66.462	16.897	5.692	1.00	29.37 A
45	ATOM	466	CB	ARG A 129	66.484	18.282	5.032	1.00	32.35 A
	ATOM	467	CG	ARG A 129	66.936	18.280	3.583	1.00	36.81 A
	ATOM	468	CD	ARG A 129	67.208	19.693	3.064	1.00	40.45 A
	ATOM	469	NE	ARG A 129	66.178	20.651	3.459	1.00	44.54 A
	ATOM	470	CZ	ARG A 129	64.874	20.474	3.268	1.00	48.21 A
50	ATOM	471	NH1	ARG A 129	64.431	19.366	2.681	1.00	50.01 A
	ATOM	472	NH2	ARG A 129	64.008	21.403	3.668	1.00	47.79 A
	ATOM	473	C	ARG A 129	67.884	16.379	5.828	1.00	28.98 A
	ATOM	474	O	ARG A 129	68.316	15.532	5.054	1.00	28.26 A
	ATOM	475	N	GLU A 130	68.606	16.895	6.822	1.00	29.28 A
55	ATOM	476	CA	GLU A 130	69.988	16.490	7.057	1.00	30.58 A
	ATOM	477	CB	GLU A 130	70.556	17.203	8.318	1.00	34.18 A
	ATOM	478	CG	GLU A 130	72.078	17.220	8.344	1.00	38.81 A
	ATOM	479	CD	GLU A 130	72.633	17.650	9.702	1.00	41.66 A
	ATOM	480	OE1	GLU A 130	71.946	18.408	10.427	1.00	42.36 A

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      ATOM    481   OE2 GLU A 130      73.771  17.236  10.035  1.00 42.31 A
      ATOM    482   C   GLU A 130      70.063  14.984   7.273  1.00 30.12 A
      ATOM    483   O   GLU A 130      70.861  14.298   6.638  1.00 29.62 A
      ATOM    484   N   ARG A 131      69.228  14.474   8.173  1.00 29.21 A
 5    ATOM    485   CA  ARG A 131      69.215  13.046   8.458  1.00 30.93 A
      ATOM    486   CB  ARG A 131      68.241  12.724   9.601  1.00 32.88 A
      ATOM    487   CG  ARG A 131      68.035  11.223   9.795  1.00 36.48 A
      ATOM    488   CD  ARG A 131      67.069  10.885  10.922  1.00 41.14 A
      ATOM    489   NE  ARG A 131      66.859   9.440  11.012  1.00 45.98 A
10    ATOM    490   CZ  ARG A 131      66.167   8.833  11.974  1.00 48.77 A
      ATOM    491   NH1 ARG A 131      65.605   9.546  12.946  1.00 48.39 A
      ATOM    492   NH2 ARG A 131      66.045   7.509  11.968  1.00 48.16 A
      ATOM    493   C   ARG A 131      68.836  12.226   7.224  1.00 29.97 A
      ATOM    494   O   ARG A 131      69.398  11.157   6.986  1.00 28.24 A
15    ATOM    495   N   ASP A 132      67.889  12.725   6.437  1.00 28.56 A
      ATOM    496   CA  ASP A 132      67.460  11.996   5.251  1.00 29.18 A
      ATOM    497   CB  ASP A 132      66.160  12.583   4.710  1.00 31.39 A
      ATOM    498   CG  ASP A 132      65.005  12.409   5.682  1.00 38.76 A
      ATOM    499   OD1 ASP A 132      64.892  11.319   6.283  1.00 40.09 A
20    ATOM    500   OD2 ASP A 132      64.206  13.355   5.846  1.00 44.19 A
      ATOM    501   C   ASP A 132      68.510  11.936   4.150  1.00 27.67 A
      ATOM    502   O   ASP A 132      68.688  10.896   3.522  1.00 27.56 A
      ATOM    503   N   VAL A 133      69.200  13.044   3.909  1.00 26.09 A
      ATOM    504   CA  VAL A 133      70.232  13.063   2.886  1.00 26.09 A
25    ATOM    505   CB  VAL A 133      70.859  14.459   2.742  1.00 25.26 A
      ATOM    506   CG1 VAL A 133      72.157  14.369   1.961  1.00 24.32 A
      ATOM    507   CG2 VAL A 133      69.890  15.390   2.029  1.00 24.76 A
      ATOM    508   C   VAL A 133      71.320  12.076   3.266  1.00 25.33 A
      ATOM    509   O   VAL A 133      71.742  11.270   2.445  1.00 23.59 A
30    ATOM    510   N   MET A 134      71.764  12.138   4.520  1.00 26.01 A
      ATOM    511   CA  MET A 134      72.812  11.243   4.995  1.00 27.63 A
      ATOM    512   CB  MET A 134      73.210  11.576   6.436  1.00 25.11 A
      ATOM    513   CG  MET A 134      74.056  12.834   6.539  1.00 27.52 A
      ATOM    514   SD  MET A 134      74.875  13.035   8.132  1.00 28.28 A
35    ATOM    515   CE  MET A 134      73.545  13.741   9.104  1.00 28.66 A
      ATOM    516   C   MET A 134      72.431   9.779   4.901  1.00 28.59 A
      ATOM    517   O   MET A 134      73.276   8.938   4.599  1.00 31.12 A
      ATOM    518   N   SER A 135      71.168   9.467   5.165  1.00 29.14 A
      ATOM    519   CA  SER A 135      70.709   8.082   5.090  1.00 31.93 A
40    ATOM    520   CB  SER A 135      69.261   7.966   5.558  1.00 32.44 A
      ATOM    521   OG  SER A 135      69.112   8.470   6.868  1.00 40.09 A
      ATOM    522   C   SER A 135      70.786   7.557   3.668  1.00 31.36 A
      ATOM    523   O   SER A 135      71.010   6.374   3.454  1.00 32.23 A
      ATOM    524   N   ARG A 136      70.597   8.448   2.701  1.00 31.66 A
45    ATOM    525   CA  ARG A 136      70.602   8.075   1.293  1.00 32.53 A
      ATOM    526   CB  ARG A 136      69.798   9.095   0.491  1.00 33.51 A
      ATOM    527   CG  ARG A 136      68.361   9.274   0.962  1.00 38.41 A
      ATOM    528   CD  ARG A 136      67.676  10.352   0.137  1.00 40.27 A
      ATOM    529   NE  ARG A 136      67.850  10.090  -1.288  1.00 42.75 A
50    ATOM    530   CZ  ARG A 136      67.560  10.953  -2.253  1.00 44.58 A
      ATOM    531   NH1 ARG A 136      67.071  12.151  -1.950  1.00 45.74 A
      ATOM    532   NH2 ARG A 136      67.771  10.621  -3.522  1.00 43.43 A
      ATOM    533   C   ARG A 136      71.985   7.946   0.670  1.00 32.48 A
      ATOM    534   O   ARG A 136      72.113   7.513  -0.474  1.00 32.48 A
55    ATOM    535   N   LEU A 137      73.019   8.329   1.406  1.00 30.72 A
      ATOM    536   CA  LEU A 137      74.371   8.253   0.873  1.00 30.30 A
      ATOM    537   CB  LEU A 137      75.167   9.508   1.262  1.00 29.84 A
      ATOM    538   CG  LEU A 137      74.541  10.843   0.831  1.00 30.25 A
      ATOM    539   CD1 LEU A 137      75.488  11.963   1.154  1.00 29.16 A
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	ATOM	540	CD2	LEU A 137	74.230	10.835	-0.656	1.00 29.68 A
	ATOM	541	C	LEU A 137	75.083	7.006	1.369	1.00 29.52 A
	ATOM	542	O	LEU A 137	75.033	6.684	2.553	1.00 31.12 A
	ATOM	543	N	ASP A 138	75.745	6.310	0.453	1.00 27.02 A
5	ATOM	544	CA	ASP A 138	76.467	5.087	0.773	1.00 25.70 A
	ATOM	545	CB	ASP A 138	75.556	3.887	0.492	1.00 29.85 A
	ATOM	546	CG	ASP A 138	76.198	2.567	0.858	1.00 33.94 A
	ATOM	547	OD1	ASP A 138	76.815	2.486	1.949	1.00 34.64 A
	ATOM	548	OD2	ASP A 138	76.074	1.610	0.058	1.00 35.28 A
10	ATOM	549	C	ASP A 138	77.699	5.062	-0.127	1.00 24.23 A
	ATOM	550	O	ASP A 138	77.765	4.300	-1.091	1.00 24.33 A
	ATOM	551	N	HIS A 139	78.672	5.904	0.209	1.00 20.89 A
	ATOM	552	CA	HIS A 139	79.888	6.069	-0.577	1.00 19.30 A
	ATOM	553	CB	HIS A 139	79.681	7.243	-1.553	1.00 17.75 A
15	ATOM	554	CG	HIS A 139	80.774	7.410	-2.564	1.00 17.45 A
	ATOM	555	CD2	HIS A 139	80.794	7.179	-3.897	1.00 16.63 A
	ATOM	556	ND1	HIS A 139	82.034	7.862	-2.235	1.00 20.01 A
	ATOM	557	CE1	HIS A 139	82.784	7.901	-3.322	1.00 16.89 A
	ATOM	558	NE2	HIS A 139	82.054	7.491	-4.344	1.00 16.94 A
20	ATOM	559	C	HIS A 139	81.066	6.347	0.352	1.00 19.25 A
	ATOM	560	O	HIS A 139	80.914	6.990	1.388	1.00 21.17 A
	ATOM	561	N	PRO A 140	82.265	5.881	-0.021	1.00 17.84 A
	ATOM	562	CD	PRO A 140	82.575	5.120	-1.243	1.00 16.07 A
	ATOM	563	CA	PRO A 140	83.467	6.079	0.789	1.00 18.04 A
25	ATOM	564	CB	PRO A 140	84.518	5.240	0.055	1.00 18.70 A
	ATOM	565	CG	PRO A 140	84.061	5.315	-1.365	1.00 19.17 A
	ATOM	566	C	PRO A 140	83.919	7.523	1.014	1.00 19.75 A
	ATOM	567	O	PRO A 140	84.686	7.793	1.930	1.00 21.01 A
	ATOM	568	N	PHE A 141	83.460	8.457	0.192	1.00 20.21 A
30	ATOM	569	CA	PHE A 141	83.869	9.837	0.389	1.00 20.05 A
	ATOM	570	CB	PHE A 141	84.149	10.496	-0.964	1.00 20.20 A
	ATOM	571	CG	PHE A 141	85.333	9.909	-1.686	1.00 20.95 A
	ATOM	572	CD1	PHE A 141	86.362	9.297	-0.975	1.00 21.45 A
	ATOM	573	CD2	PHE A 141	85.430	9.983	-3.071	1.00 20.27 A
35	ATOM	574	CE1	PHE A 141	87.476	8.765	-1.635	1.00 22.05 A
	ATOM	575	CE2	PHE A 141	86.541	9.456	-3.743	1.00 20.58 A
	ATOM	576	CZ	PHE A 141	87.562	8.848	-3.027	1.00 20.58 A
	ATOM	577	C	PHE A 141	82.881	10.679	1.210	1.00 18.71 A
	ATOM	578	O	PHE A 141	83.015	11.897	1.300	1.00 19.78 A
40	ATOM	579	N	PHE A 142	81.903	10.027	1.823	1.00 18.61 A
	ATOM	580	CA	PHE A 142	80.915	10.738	2.639	1.00 19.11 A
	ATOM	581	CB	PHE A 142	79.543	10.709	1.966	1.00 17.36 A
	ATOM	582	CG	PHE A 142	79.458	11.565	0.750	1.00 19.19 A
	ATOM	583	CD1	PHE A 142	79.258	12.936	0.863	1.00 19.44 A
45	ATOM	584	CD2	PHE A 142	79.649	11.016	-0.511	1.00 18.39 A
	ATOM	585	CE1	PHE A 142	79.254	13.759	-0.268	1.00 20.66 A
	ATOM	586	CE2	PHE A 142	79.648	11.824	-1.644	1.00 20.80 A
	ATOM	587	CZ	PHE A 142	79.451	13.203	-1.523	1.00 18.95 A
	ATOM	588	C	PHE A 142	80.787	10.132	4.023	1.00 18.98 A
50	ATOM	589	O	PHE A 142	80.735	8.918	4.168	1.00 18.39 A
	ATOM	590	N	VAL A 143	80.736	10.983	5.041	1.00 20.79 A
	ATOM	591	CA	VAL A 143	80.578	10.499	6.401	1.00 20.94 A
	ATOM	592	CB	VAL A 143	80.456	11.670	7.404	1.00 21.95 A
	ATOM	593	CG1	VAL A 143	80.081	11.145	8.783	1.00 21.30 A
55	ATOM	594	CG2	VAL A 143	81.781	12.433	7.473	1.00 19.28 A
	ATOM	595	C	VAL A 143	79.299	9.683	6.396	1.00 21.12 A
	ATOM	596	O	VAL A 143	78.280	10.124	5.895	1.00 23.63 A
	ATOM	597	N	LYS A 144	79.367	8.481	6.940	1.00 23.64 A
	ATOM	598	CA	LYS A 144	78.221	7.582	6.990	1.00 24.47 A

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      ATOM    599   CB   LYS A 144      78.714    6.131    6.869   1.00 25.53 A
      ATOM    600   CG   LYS A 144      77.635    5.061    6.997   1.00 32.25 A
      ATOM    601   CD   LYS A 144      78.240    3.660    6.870   1.00 36.07 A
      ATOM    602   CE   LYS A 144      77.187    2.563    7.033   1.00 38.50 A
 5    ATOM    603   NZ   LYS A 144      77.791    1.186    7.051   1.00 41.46 A
      ATOM    604   C    LYS A 144      77.418    7.744    8.275   1.00 22.60 A
      ATOM    605   O    LYS A 144      77.973    8.019    9.335   1.00 23.18 A
      ATOM    606   N    LEU A 145      76.104    7.583    8.170   1.00 21.59 A
      ATOM    607   CA   LEU A 145      75.224    7.661    9.327   1.00 21.42 A
10    ATOM    608   CB   LEU   145      73.918    8.372    8.967   0.50 21.21 AC1
      ATOM    609   CG   LEU   145      72.843    8.332   10.060   0.50 21.32 AC1
      ATOM    610   CD1  LEU   145      73.356    9.036   11.309   0.50 19.59 AC1
      ATOM    611   CD2  LEU   145      71.569    8.994    9.559   0.50 21.45 AC1
      ATOM    612   C    LEU A 145      74.919    6.215    9.733   1.00 21.84 A
15    ATOM    613   O    LEU A 145      74.283    5.471    8.977   1.00 19.24 A
      ATOM    614   N    TYR A 146      75.363    5.816   10.921   1.00 19.77 A
      ATOM    615   CA   TYR A 146      75.143    4.444   11.368   1.00 19.92 A
      ATOM    616   CB   TYR A 146      76.326    3.944   12.188   1.00 18.05 A
      ATOM    617   CG   TYR A 146      77.601    3.803   11.415   1.00 17.64 A
20    ATOM    618   CD1  TYR A 146      78.435    4.909   11.203   1.00 18.26 A
      ATOM    619   CE1  TYR A 146      79.638    4.782   10.516   1.00 17.33 A
      ATOM    620   CD2  TYR A 146      78.000    2.560   10.910   1.00 15.57 A
      ATOM    621   CE2  TYR A 146      79.208    2.419   10.215   1.00 17.53 A
      ATOM    622   CZ   TYR A 146      80.022    3.535   10.026   1.00 18.78 A
25    ATOM    623   OH   TYR A 146      81.224    3.413    9.369   1.00 19.47 A
      ATOM    624   C    TYR A 146      73.884    4.194   12.170   1.00 20.60 A
      ATOM    625   O    TYR A 146      73.331    3.100   12.108   1.00 21.73 A
      ATOM    626   N    PHE A 147      73.431    5.192   12.921   1.00 20.92 A
      ATOM    627   CA   PHE A 147      72.239    5.025   13.745   1.00 22.59 A
30    ATOM    628   CB   PHE A 147      72.538    4.063   14.917   1.00 22.24 A
      ATOM    629   CG   PHE A 147      73.708    4.488   15.770   1.00 21.88 A
      ATOM    630   CD1  PHE A 147      73.607    5.578   16.625   1.00 21.93 A
      ATOM    631   CD2  PHE A 147      74.936    3.843   15.657   1.00 21.57 A
      ATOM    632   CE1  PHE A 147      74.715    6.025   17.352   1.00 25.21 A
35    ATOM    633   CE2  PHE A 147      76.051    4.279   16.377   1.00 21.30 A
      ATOM    634   CZ   PHE A 147      75.942    5.371   17.224   1.00 24.23 A
      ATOM    635   C    PHE A 147      71.737    6.343   14.308   1.00 23.77 A
      ATOM    636   O    PHE A 147      72.448    7.352   14.307   1.00 22.91 A
      ATOM    637   N    THR A 148      70.501    6.324   14.791   1.00 25.15 A
40    ATOM    638   CA   THR A 148      69.908    7.503   15.403   1.00 25.99 A
      ATOM    639   CB   THR A 148      68.953    8.251   14.466   1.00 27.00 A
      ATOM    640   OG1  THR A 148      67.850    7.400   14.148   1.00 27.79 A
      ATOM    641   CG2  THR A 148      69.660    8.661   13.193   1.00 26.35 A
      ATOM    642   C    THR A 148      69.080    7.055   16.580   1.00 26.23 A
45    ATOM    643   O    THR A 148      68.591    5.930   16.620   1.00 26.46 A
      ATOM    644   N    PHE A 149      68.942    7.943   17.550   1.00 25.72 A
      ATOM    645   CA   PHE A 149      68.133    7.662   18.706   1.00 25.10 A
      ATOM    646   CB   PHE A 149      68.789    6.593   19.602   1.00 23.02 A
      ATOM    647   CG   PHE A 149      70.088    7.011   20.231   1.00 22.26 A
50    ATOM    648   CD1  PHE A 149      70.105    7.794   21.373   1.00 20.98 A
      ATOM    649   CD2  PHE A 149      71.302    6.587   19.694   1.00 21.51 A
      ATOM    650   CE1  PHE A 149      71.312    8.151   21.976   1.00 22.36 A
      ATOM    651   CE2  PHE A 149      72.511    6.939   20.288   1.00 21.06 A
      ATOM    652   CZ   PHE A 149      72.519    7.722   21.430   1.00 19.46 A
55    ATOM    653   C    PHE A 149      67.931    8.974   19.427   1.00 27.05 A
      ATOM    654   O    PHE A 149      68.565    9.974   19.096   1.00 27.03 A
      ATOM    655   N    GLN A 150      67.024    8.984   20.391   1.00 29.18 A
      ATOM    656   CA   GLN A 150      66.757   10.198   21.133   1.00 31.94 A
      ATOM    657   CB   GLN A 150      65.697   11.035   20.409   1.00 32.80 A
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ATOM	658	CG	GLN A 150	64.385	10.302	20.153	1.00	34.22	A
ATOM	659	CD	GLN A 150	63.340	11.169	19.459	1.00	36.88	A
ATOM	660	OE1	GLN A 150	62.630	11.959	20.098	1.00	37.60	A
ATOM	661	NE2	GLN A 150	63.248	11.033	18.141	1.00	35.03	A
ATOM	662	C	GLN A 150	66.269	9.890	22.531	1.00	32.97	A
ATOM	663	O	GLN A 150	65.857	8.768	22.825	1.00	33.19	A
ATOM	664	N	ASP A 151	66.355	10.890	23.398	1.00	34.27	A
ATOM	665	CA	ASP A 151	65.847	10.771	24.753	1.00	35.77	A
ATOM	666	CB	ASP A 151	66.957	10.933	25.796	1.00	35.66	A
ATOM	667	CG	ASP A 151	67.760	12.194	25.604	1.00	38.11	A
ATOM	668	OD1	ASP A 151	67.172	13.216	25.195	1.00	39.31	A
ATOM	669	OD2	ASP A 151	68.982	12.167	25.879	1.00	41.03	A
ATOM	670	C	ASP A 151	64.823	11.904	24.838	1.00	36.64	A
ATOM	671	O	ASP A 151	64.401	12.428	23.803	1.00	36.42	A
ATOM	672	N	ASP A 152	64.427	12.301	26.041	1.00	38.18	A
ATOM	673	CA	ASP A 152	63.427	13.357	26.171	1.00	39.81	A
ATOM	674	CB	ASP A 152	63.022	13.534	27.637	1.00	44.46	A
ATOM	675	CG	ASP A 152	62.291	12.324	28.186	1.00	50.02	A
ATOM	676	OD1	ASP A 152	61.313	11.876	27.541	1.00	52.36	A
ATOM	677	OD2	ASP A 152	62.689	11.822	29.263	1.00	52.75	A
ATOM	678	C	ASP A 152	63.822	14.709	25.594	1.00	37.45	A
ATOM	679	O	ASP A 152	62.988	15.408	25.026	1.00	36.81	A
ATOM	680	N	GLU A 153	65.091	15.077	25.708	1.00	35.46	A
ATOM	681	CA	GLU A 153	65.501	16.378	25.211	1.00	33.50	A
ATOM	682	CB	GLU A 153	66.132	17.174	26.354	1.00	36.16	A
ATOM	683	CG	GLU A 153	65.389	17.065	27.687	1.00	37.72	A
ATOM	684	CD	GLU A 153	65.657	15.753	28.402	0.00	37.23	A
ATOM	685	OE1	GLU A 153	65.063	15.530	29.479	0.00	37.39	A
ATOM	686	OE2	GLU A 153	66.464	14.947	27.893	0.00	37.39	A
ATOM	687	C	GLU A 153	66.432	16.425	23.995	1.00	31.79	A
ATOM	688	O	GLU A 153	66.498	17.451	23.323	1.00	30.80	A
ATOM	689	N	LYS A 154	67.131	15.334	23.691	1.00	30.35	A
ATOM	690	CA	LYS A 154	68.069	15.357	22.569	1.00	28.14	A
ATOM	691	CB	LYS A 154	69.505	15.358	23.099	1.00	27.32	A
ATOM	692	CG	LYS A 154	69.853	16.503	24.026	1.00	29.91	A
ATOM	693	CD	LYS A 154	71.234	16.302	24.648	1.00	30.14	A
ATOM	694	CE	LYS A 154	71.606	17.450	25.592	1.00	32.52	A
ATOM	695	NZ	LYS A 154	72.780	17.121	26.469	1.00	31.90	A
ATOM	696	C	LYS A 154	67.967	14.261	21.515	1.00	26.36	A
ATOM	697	O	LYS A 154	67.517	13.145	21.781	1.00	23.71	A
ATOM	698	N	LEU A 155	68.413	14.610	20.311	1.00	24.76	A
ATOM	699	CA	LEU A 155	68.462	13.691	19.178	1.00	23.29	A
ATOM	700	CB	LEU A 155	68.012	14.382	17.891	1.00	22.72	A
ATOM	701	CG	LEU A 155	66.588	14.916	17.739	1.00	24.25	A
ATOM	702	CD1	LEU A 155	66.441	15.489	16.329	1.00	24.62	A
ATOM	703	CD2	LEU A 155	65.576	13.798	17.965	1.00	23.10	A
ATOM	704	C	LEU A 155	69.939	13.325	19.022	1.00	21.93	A
ATOM	705	O	LEU A 155	70.812	14.167	19.233	1.00	20.17	A
ATOM	706	N	TYR A 156	70.227	12.088	18.647	1.00	19.72	A
ATOM	707	CA	TYR A 156	71.617	11.693	18.462	1.00	20.11	A
ATOM	708	CB	TYR A 156	72.061	10.703	19.540	1.00	20.98	A
ATOM	709	CG	TYR A 156	71.885	11.172	20.963	1.00	20.98	A
ATOM	710	CD1	TYR A 156	70.619	11.313	21.520	1.00	22.18	A
ATOM	711	CE1	TYR A 156	70.457	11.724	22.850	1.00	25.21	A
ATOM	712	CD2	TYR A 156	72.991	11.449	21.762	1.00	21.38	A
ATOM	713	CE2	TYR A 156	72.843	11.859	23.086	1.00	25.12	A
ATOM	714	CZ	TYR A 156	71.576	11.995	23.622	1.00	24.83	A
ATOM	715	OH	TYR A 156	71.431	12.410	24.923	1.00	25.97	A
ATOM	716	C	TYR A 156	71.792	11.033	17.108	1.00	20.02	A

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      ATOM   717  O    TYR A 156      70.959  10.231  16.704  1.00 22.19 A
      ATOM   718  N    PHE A 157      72.860  11.385  16.399  1.00 19.17 A
      ATOM   719  CA   PHE A 157      73.140  10.769  15.114  1.00 18.65 A
      ATOM   720  CB   PHE A 157      73.071  11.780  13.969  1.00 21.02 A
   5  ATOM   721  CG   PHE A 157      71.719  12.411  13.791  1.00 25.64 A
      ATOM   722  CD1  PHE A 157      70.558  11.724  14.135  1.00 27.84 A
      ATOM   723  CD2  PHE A 157      71.603  13.695  13.267  1.00 27.19 A
      ATOM   724  CE1  PHE A 157      69.301  12.310  13.964  1.00 28.87 A
      ATOM   725  CE2  PHE A 157      70.350  14.288  13.091  1.00 28.27 A
  10  ATOM   726  CZ   PHE A 157      69.200  13.595  13.442  1.00 26.64 A
      ATOM   727  C    PHE A 157      74.543  10.212  15.204  1.00 19.60 A
      ATOM   728  O    PHE A 157      75.489  10.952  15.467  1.00 19.26 A
      ATOM   729  N    GLY A 158      74.668   8.902  15.010  1.00 19.26 A
      ATOM   730  CA   GLY A 158      75.972   8.265  15.063  1.00 18.63 A
  15  ATOM   731  C    GLY A 158      76.615   8.309  13.693  1.00 16.84 A
      ATOM   732  O    GLY A 158      76.160   7.646  12.772  1.00 15.29 A
      ATOM   733  N    LEU A 159      77.677   9.096  13.567  1.00 18.10 A
      ATOM   734  CA   LEU A 159      78.386   9.263  12.302  1.00 17.32 A
      ATOM   735  CB   LEU A 159      78.502  10.753  11.984  1.00 16.80 A
  20  ATOM   736  CG   LEU A 159      77.161  11.485  12.068  1.00 18.21 A
      ATOM   737  CD1  LEU A 159      77.376  12.992  12.058  1.00 15.34 A
      ATOM   738  CD2  LEU A 159      76.280  11.036  10.906  1.00 14.27 A
      ATOM   739  C    LEU A 159      79.780   8.665  12.375  1.00 18.27 A
      ATOM   740  O    LEU A 159      80.338   8.518  13.465  1.00 18.92 A
  25  ATOM   741  N    SER A 160      80.343   8.320  11.220  1.00 16.88 A
      ATOM   742  CA   SER A 160      81.691   7.770  11.194  1.00 19.02 A
      ATOM   743  CB   SER A 160      82.086   7.362   9.771  1.00 20.02 A
      ATOM   744  OG   SER A 160      81.866   8.421   8.864  1.00 25.88 A
      ATOM   745  C    SER A 160      82.655   8.831  11.724  1.00 18.34 A
  30  ATOM   746  O    SER A 160      82.413  10.032  11.588  1.00 17.84 A
      ATOM   747  N    TYR A 161      83.743   8.384  12.335  1.00 17.11 A
      ATOM   748  CA   TYR A 161      84.723   9.300  12.901  1.00 19.21 A
      ATOM   749  CB   TYR A 161      85.146   8.802  14.293  1.00 19.37 A
      ATOM   750  CG   TYR A 161      86.269   9.582  14.944  1.00 22.52 A
  35  ATOM   751  CD1  TYR A 161      86.276  10.978  14.929  1.00 21.17 A
      ATOM   752  CE1  TYR A 161      87.283  11.703  15.559  1.00 18.10 A
      ATOM   753  CD2  TYR A 161      87.313   8.923  15.612  1.00 21.92 A
      ATOM   754  CE2  TYR A 161      88.330   9.647  16.252  1.00 20.10 A
      ATOM   755  CZ   TYR A 161      88.301  11.039  16.220  1.00 20.24 A
  40  ATOM   756  OH   TYR A 161      89.266  11.776  16.873  1.00 20.31 A
      ATOM   757  C    TYR A 161      85.934   9.459  11.997  1.00 20.13 A
      ATOM   758  O    TYR A 161      86.621   8.491  11.675  1.00 21.97 A
      ATOM   759  N    ALA A 162      86.182  10.686  11.571  1.00 19.13 A
      ATOM   760  CA   ALA A 162      87.320  10.969  10.717  1.00 20.60 A
  45  ATOM   761  CB   ALA A 162      86.907  11.919   9.592  1.00 21.18 A
      ATOM   762  C    ALA A 162      88.375  11.617  11.604  1.00 21.36 A
      ATOM   763  O    ALA A 162      88.391  12.835  11.752  1.00 20.74 A
      ATOM   764  N    LYS A 163      89.237  10.787  12.195  1.00 21.80 A
      ATOM   765  CA   LYS A 163      90.294  11.232  13.102  1.00 25.38 A
  50  ATOM   766  CB   LYS A 163      91.315  10.109  13.332  1.00 30.51 A
      ATOM   767  CG   LYS A 163      90.874   8.987  14.251  1.00 38.24 A
      ATOM   768  CD   LYS A 163      92.000   7.970  14.456  1.00 43.14 A
      ATOM   769  CE   LYS A 163      91.556   6.794  15.342  1.00 46.63 A
      ATOM   770  NZ   LYS A 163      91.252   7.200  16.752  1.00 47.21 A
  55  ATOM   771  C    LYS A 163      91.082  12.482  12.719  1.00 25.07 A
      ATOM   772  O    LYS A 163      91.276  13.373  13.541  1.00 25.50 A
      ATOM   773  N    ASN A 164      91.540  12.549  11.477  1.00 25.63 A
      ATOM   774  CA   ASN A 164      92.363  13.668  11.054  1.00 26.04 A
      ATOM   775  CB   ASN A 164      93.115  13.278   9.787  1.00 26.02 A
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	ATOM	776	CG	ASN A 164	94.062	12.120	10.033	1.00	29.07 A
	ATOM	777	OD1	ASN A 164	94.854	12.155	10.969	1.00	30.18 A
	ATOM	778	ND2	ASN A 164	93.979	11.089	9.207	1.00	32.14 A
	ATOM	779	C	ASN A 164	91.725	15.040	10.915	1.00	25.35 A
5	ATOM	780	O	ASN A 164	92.416	16.021	10.640	1.00	26.51 A
	ATOM	781	N	GLY A 165	90.419	15.122	11.116	1.00	23.92 A
	ATOM	782	CA	GLY A 165	89.761	16.413	11.043	1.00	24.35 A
	ATOM	783	C	GLY A 165	89.663	17.123	9.704	1.00	23.94 A
	ATOM	784	O	GLY A 165	89.632	16.501	8.643	1.00	25.49 A
10	ATOM	785	N	GLU A 166	89.623	18.449	9.773	1.00	23.07 A
	ATOM	786	CA	GLU A 166	89.467	19.301	8.602	1.00	23.26 A
	ATOM	787	CB	GLU A 166	89.164	20.739	9.036	1.00	23.73 A
	ATOM	788	CG	GLU A 166	88.271	20.875	10.257	1.00	27.31 A
	ATOM	789	CD	GLU A 166	87.812	22.302	10.474	1.00	29.74 A
15	ATOM	790	OE1	GLU A 166	88.586	23.221	10.130	1.00	30.87 A
	ATOM	791	OE2	GLU A 166	86.686	22.510	10.989	1.00	29.80 A
	ATOM	792	C	GLU A 166	90.612	19.354	7.602	1.00	24.47 A
	ATOM	793	O	GLU A 166	91.786	19.473	7.968	1.00	24.85 A
	ATOM	794	N	LEU A 167	90.251	19.287	6.328	1.00	23.47 A
20	ATOM	795	CA	LEU A 167	91.228	19.393	5.262	1.00	24.00 A
	ATOM	796	CB	LEU A 167	90.528	19.369	3.901	1.00	22.48 A
	ATOM	797	CG	LEU A 167	91.373	19.759	2.679	1.00	23.87 A
	ATOM	798	CD1	LEU A 167	92.583	18.846	2.563	1.00	20.03 A
	ATOM	799	CD2	LEU A 167	90.516	19.680	1.418	1.00	22.08 A
25	ATOM	800	C	LEU A 167	91.943	20.732	5.448	1.00	24.82 A
	ATOM	801	O	LEU A 167	93.138	20.858	5.165	1.00	24.59 A
	ATOM	802	N	LEU A 168	91.206	21.731	5.927	1.00	24.43 A
	ATOM	803	CA	LEU A 168	91.784	23.055	6.150	1.00	28.25 A
	ATOM	804	CB	LEU A 168	90.746	24.009	6.747	1.00	27.44 A
30	ATOM	805	CG	LEU A 168	91.310	25.395	7.090	1.00	28.57 A
	ATOM	806	CD1	LEU A 168	91.624	26.150	5.809	1.00	28.11 A
	ATOM	807	CD2	LEU A 168	90.312	26.174	7.921	1.00	29.97 A
	ATOM	808	C	LEU A 168	92.999	23.014	7.074	1.00	28.43 A
	ATOM	809	O	LEU A 168	93.952	23.760	6.882	1.00	30.21 A
35	ATOM	810	N	LYS A 169	92.958	22.152	8.081	1.00	30.23 A
	ATOM	811	CA	LYS A 169	94.072	22.050	9.008	1.00	33.52 A
	ATOM	812	CB	LYS A 169	93.821	20.955	10.046	1.00	35.45 A
	ATOM	813	CG	LYS A 169	94.972	20.784	11.033	1.00	40.43 A
	ATOM	814	CD	LYS A 169	94.808	19.562	11.943	1.00	41.43 A
40	ATOM	815	CE	LYS A 169	95.047	18.261	11.186	1.00	42.67 A
	ATOM	816	NZ	LYS A 169	95.057	17.068	12.096	1.00	43.84 A
	ATOM	817	C	LYS A 169	95.329	21.718	8.228	1.00	34.58 A
	ATOM	818	O	LYS A 169	96.377	22.333	8.421	1.00	35.28 A
	ATOM	819	N	TYR A 170	95.219	20.739	7.339	1.00	34.55 A
45	ATOM	820	CA	TYR A 170	96.357	20.328	6.539	1.00	35.07 A
	ATOM	821	CB	TYR A 170	96.018	19.047	5.790	1.00	35.72 A
	ATOM	822	CG	TYR A 170	96.500	17.869	6.716	1.00	37.48 A
	ATOM	823	CD1	TYR A 170	97.256	17.250	7.040	1.00	39.42 A
	ATOM	824	CE1	TYR A 170	97.313	16.230	7.987	1.00	40.93 A
50	ATOM	825	CD2	TYR A 170	94.895	17.435	7.355	1.00	38.83 A
	ATOM	826	CE2	TYR A 170	94.937	16.417	8.303	1.00	41.76 A
	ATOM	827	CZ	TYR A 170	96.149	15.821	8.615	1.00	42.18 A
	ATOM	828	OH	TYR A 170	96.196	14.827	9.563	1.00	45.30 A
	ATOM	829	C	TYR A 170	96.823	21.404	5.585	1.00	35.67 A
55	ATOM	830	O	TYR A 170	97.999	21.465	5.248	1.00	35.28 A
	ATOM	831	N	ILE A 171	95.904	22.260	5.154	1.00	36.78 A
	ATOM	832	CA	ILE A 171	96.272	23.333	4.252	1.00	38.95 A
	ATOM	833	CB	ILE A 171	95.032	24.048	3.682	1.00	39.15 A
	ATOM	834	CG2	ILE A 171	95.452	25.329	2.960	1.00	38.11 A

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      ATOM    835   CG1 ILE A 171      94.296  23.113   2.718  1.00 37.57 A
      ATOM    836   CD1 ILE A 171      93.041  23.712   2.116  1.00 37.48 A
      ATOM    837   C   ILE A 171      97.146  24.338   4.990  1.00 41.33 A
      ATOM    838   O   ILE A 171      98.173  24.765   4.466  1.00 42.36 A
  5   ATOM    839   N   ARG A 172      96.748  24.713   6.203  1.00 42.79 A
      ATOM    840   CA  ARG A 172      97.541  25.662   6.981  1.00 44.62 A
      ATOM    841   CB  ARG A 172      96.809  26.103   8.253  1.00 46.82 A
      ATOM    842   CG  ARG A 172      95.492  26.828   8.033  1.00 50.73 A
      ATOM    843   CD  ARG A 172      95.124  27.643   9.271  1.00 53.80 A
 10   ATOM    844   NE  ARG A 172      93.747  28.136   9.247  1.00 56.88 A
      ATOM    845   CZ  ARG A 172      93.183  28.766   8.218  1.00 57.65 A
      ATOM    846   NH1 ARG A 172      93.873  28.989   7.104  1.00 57.71 A
      ATOM    847   NH2 ARG A 172      91.923  29.176   8.305  1.00 56.95 A
      ATOM    848   C   ARG A 172      98.856  25.015   7.383  1.00 44.41 A
 15   ATOM    849   O   ARG A 172      99.927  25.587   7.186  1.00 45.16 A
      ATOM    850   N   LYS A 173      98.759  23.817   7.949  1.00 44.01 A
      ATOM    851   CA  LYS A 173      99.923  23.069   8.398  1.00 42.99 A
      ATOM    852   CB  LYS A 173      99.538  21.616   8.667  1.00 44.20 A
      ATOM    853   CG  LYS A 173     100.721  20.689   8.908  1.00 45.81 A
 20   ATOM    854   CD  LYS A 173     100.272  19.238   8.987  1.00 45.28 A
      ATOM    855   CE  LYS A 173     101.457  18.296   9.120  0.00 45.43 A
      ATOM    856   NZ  LYS A 173     101.028  16.870   9.146  0.00 45.35 A
      ATOM    857   C   LYS A 173     101.081  23.108   7.412  1.00 43.20 A
      ATOM    858   O   LYS A 173     102.220  23.366   7.805  1.00 43.49 A
 25   ATOM    859   N   ILE A 174     100.802  22.867   6.133  1.00 41.97 A
      ATOM    860   CA  ILE A 174     101.871  22.859   5.136  1.00 40.94 A
      ATOM    861   CB  ILE A 174     101.874  21.536   4.336  1.00 40.61 A
      ATOM    862   CG2 ILE A 174     101.897  20.352   5.297  1.00 41.39 A
      ATOM    863   CG1 ILE A 174     100.638  21.448   3.442  1.00 40.75 A
 30   ATOM    864   CD1 ILE A 174     100.680  20.276   2.487  1.00 40.45 A
      ATOM    865   C   ILE A 174     101.882  24.024   4.149  1.00 39.97 A
      ATOM    866   O   ILE A 174     102.675  24.033   3.209  1.00 38.15 A
      ATOM    867   N   GLY A 175     101.007  25.004   4.359  1.00 40.09 A
      ATOM    868   CA  GLY A 175     100.969  26.156   3.473  1.00 39.94 A
 35   ATOM    869   C   GLY A 175     100.151  25.960   2.211  1.00 39.87 A
      ATOM    870   O   GLY A 175      99.152  26.646   2.005  1.00 40.53 A
      ATOM    871   N   SER A 176     100.586  25.043   1.354  1.00 39.28 A
      ATOM    872   CA  SER A 176      99.871  24.747   0.122  1.00 38.77 A
      ATOM    873   CB  SER A 176     100.169  25.804  -0.950  1.00 39.84 A
 40   ATOM    874   OG  SER A 176     101.537  25.823  -1.319  1.00 43.67 A
      ATOM    875   C   SER A 176     100.265  23.353  -0.358  1.00 38.39 A
      ATOM    876   O   SER A 176     101.245  22.776   0.118  1.00 39.37 A
      ATOM    877   N   PHE A 177      99.491  22.811  -1.289  1.00 35.81 A
      ATOM    878   CA  PHE A 177      99.732  21.472  -1.810  1.00 32.81 A
 45   ATOM    879   CB  PHE A 177      98.401  20.770  -2.095  1.00 32.30 A
      ATOM    880   CG  PHE A 177      97.645  20.344  -0.867  1.00 31.20 A
      ATOM    881   CD1 PHE A 177      97.806  21.005   0.348  1.00 29.02 A
      ATOM    882   CD2 PHE A 177      96.735  19.293  -0.939  1.00 30.11 A
      ATOM    883   CE1 PHE A 177      97.076  20.628   1.468  1.00 27.07 A
 50   ATOM    884   CE2 PHE A 177      95.998  18.910   0.181  1.00 29.70 A
      ATOM    885   CZ  PHE A 177      96.170  19.580   1.385  1.00 27.57 A
      ATOM    886   C   PHE A 177     100.535  21.485  -3.093  1.00 33.02 A
      ATOM    887   O   PHE A 177     100.386  22.381  -3.927  1.00 33.87 A
      ATOM    888   N   ASP A 178     101.379  20.471  -3.252  1.00 33.87 A
 55   ATOM    889   CA  ASP A 178     102.184  20.329  -4.454  1.00 33.45 A
      ATOM    890   CB  ASP A 178     103.269  19.275  -4.244  1.00 35.60 A
      ATOM    891   CG  ASP A 178     102.693  17.932  -3.855  1.00 40.22 A
      ATOM    892   OD1 ASP A 178     101.840  17.412  -4.612  1.00 42.64 A
      ATOM    893   OD2 ASP A 178     103.079  17.398  -2.793  1.00 43.32 A
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	ATOM	894	C	ASP	A	178	101.195	19.859	−5.519	1.00 32.50 A
	ATOM	895	O	ASP	A	178	99.999	19.723	−5.245	1.00 30.51 A
	ATOM	896	N	GLU	A	179	101.684	19.584	−6.720	1.00 31.46 A
	ATOM	897	CA	GLU	A	179	100.790	19.160	−7.776	1.00 32.00 A
5	ATOM	898	CB	GLU	A	179	101.480	19.291	−9.138	1.00 33.70 A
	ATOM	899	CG	GLU	A	179	100.666	18.711	−10.284	1.00 38.81 A
	ATOM	900	CD	GLU	A	179	101.129	19.195	−11.646	1.00 42.71 A
	ATOM	901	OE1	GLU	A	179	102.358	19.338	−11.844	1.00 43.96 A
	ATOM	902	OE2	GLU	A	179	100.261	19.422	−12.523	1.00 44.44 A
10	ATOM	903	C	GLU	A	179	100.189	17.766	−7.635	1.00 29.96 A
	ATOM	904	O	GLU	A	179	99.023	17.564	−7.965	1.00 27.38 A
	ATOM	905	N	THR	A	180	100.959	16.803	−7.141	1.00 29.86 A
	ATOM	906	CA	THR	A	180	100.429	15.448	−7.007	1.00 29.75 A
	ATOM	907	CB	THR	A	180	101.583	14.416	−6.738	1.00 30.62 A
15	ATOM	908	OG1	THR	A	180	101.050	13.206	−6.179	1.00 30.65 A
	ATOM	909	CG2	THR	A	180	102.615	14.991	−5.802	1.00 32.90 A
	ATOM	910	C	THR	A	180	99.331	15.372	−5.935	1.00 29.43 A
	ATOM	911	O	THR	A	180	98.312	14.710	−6.130	1.00 27.52 A
	ATOM	912	N	CYS	A	181	99.522	16.079	−4.823	1.00 29.55 A
20	ATOM	913	CA	CYS	A	181	98.535	16.091	−3.745	1.00 29.27 A
	ATOM	914	CB	CYS	A	181	99.156	16.681	−2.480	1.00 31.47 A
	ATOM	915	SG	CYS	A	181	100.580	15.747	−1.838	1.00 39.84 A
	ATOM	916	C	CYS	A	181	97.271	16.879	−4.126	1.00 28.16 A
	ATOM	917	O	CYS	A	181	96.156	16.495	−3.762	1.00 26.55 A
25	ATOM	918	N	THR	A	182	97.441	17.984	−4.847	1.00 25.71 A
	ATOM	919	CA	THR	A	182	96.293	18.784	−5.268	1.00 24.22 A
	ATOM	920	CB	THR	A	182	96.714	20.043	−6.066	1.00 24.45 A
	ATOM	921	OG1	THR	A	182	97.515	20.901	−5.241	1.00 22.57 A
	ATOM	922	CG2	THR	A	182	95.483	20.809	−6.537	1.00 23.42 A
30	ATOM	923	C	THR	A	182	95.447	17.915	−6.184	1.00 24.78 A
	ATOM	924	O	THR	A	182	94.227	17.812	−6.020	1.00 23.72 A
	ATOM	925	N	ARG	A	183	96.109	17.283	−7.149	1.00 23.96 A
	ATOM	926	CA	ARG	A	183	95.422	16.419	−8.096	1.00 25.38 A
	ATOM	927	CB	ARG	A	183	96.416	15.782	−9.073	1.00 24.74 A
35	ATOM	928	CG	ARG	A	183	95.740	14.821	−10.044	1.00 27.88 A
	ATOM	929	CD	ARG	A	183	96.704	14.244	−11.070	1.00 30.56 A
	ATOM	930	NE	ARG	A	183	97.260	15.300	−11.904	1.00 34.63 A
	ATOM	931	CZ	ARG	A	183	98.502	15.756	−11.802	1.00 33.50 A
	ATOM	932	NH1	ARG	A	183	99.328	15.234	−10.903	1.00 31.79 A
40	ATOM	933	NH2	ARG	A	183	98.901	16.754	−12.579	1.00 31.24 A
	ATOM	934	C	ARG	A	183	94.648	15.318	−7.386	1.00 24.24 A
	ATOM	935	O	ARG	A	183	93.466	15.099	−7.659	1.00 24.95 A
	ATOM	936	N	PHE	A	184	95.319	14.628	−6.473	1.00 23.84 A
45	ATOM	937	CA	PHE	A	184	94.689	13.541	−5.742	1.00 23.63 A
	ATOM	938	CB	PHE	A	184	95.662	12.941	−4.730	1.00 25.29 A
	ATOM	939	CG	PHE	A	184	95.086	11.787	−3.961	1.00 28.53 A
	ATOM	940	CD1	PHE	A	184	94.958	10.531	−4.556	1.00 30.34 A
	ATOM	941	CD2	PHE	A	184	94.620	11.964	−2.663	1.00 28.04 A
	ATOM	942	CE1	PHE	A	184	94.370	9.465	−3.871	1.00 29.64 A
50	ATOM	943	CE2	PHE	A	184	94.030	10.908	−1.969	1.00 30.28 A
	ATOM	944	CZ	PHE	A	184	93.904	9.654	−2.576	1.00 29.09 A
	ATOM	945	C	PHE	A	184	93.431	13.977	−5.003	1.00 23.55 A
	ATOM	946	O	PHE	A	184	92.353	13.429	−5.219	1.00 24.89 A
	ATOM	947	N	TYR	A	185	93.568	14.961	−4.124	1.00 22.27 A
55	ATOM	948	CA	TYR	A	185	92.429	15.408	−3.344	1.00 21.69 A
	ATOM	949	CB	TYR	A	185	92.925	16.295	−2.200	1.00 22.66 A
	ATOM	950	CG	TYR	A	185	93.539	15.447	−1.097	1.00 25.54 A
	ATOM	951	CD1	TYR	A	185	92.738	14.614	−0.314	1.00 26.51 A
	ATOM	952	CE1	TYR	A	185	93.290	13.738	0.620	1.00 27.53 A

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      ATOM    953  CD2 TYR A 185     94.924  15.391  -0.908  1.00 28.66 A
      ATOM    954  CE2 TYR A 185     95.496  14.514   0.032  1.00 29.09 A
      ATOM    955  CZ  TYR A 185     94.667  13.688   0.790  1.00 29.75 A
      ATOM    956  OH  TYR A 185     95.204  12.806   1.702  1.00 29.03 A
   5  ATOM    957  C   TYR A 185     91.316  16.058  -4.167  1.00 21.02 A
      ATOM    958  O   TYR A 185     90.130  15.921  -3.851  1.00 18.76 A
      ATOM    959  N   THR A 186     91.689  16.731  -5.244  1.00 19.87 A
      ATOM    960  CA  THR A 186     90.690  17.337  -6.102  1.00 18.89 A
      ATOM    961  CB  THR A 186     91.344  18.170  -7.200  1.00 19.73 A
  10  ATOM    962  OG1 THR A 186     92.115  19.218  -6.603  1.00 19.38 A
      ATOM    963  CG2 THR A 186     90.282  18.765  -8.125  1.00 20.16 A
      ATOM    964  C   THR A 186     89.905  16.201  -6.753  1.00 19.05 A
      ATOM    965  O   THR A 186     88.675  16.244  -6.855  1.00 19.38 A
      ATOM    966  N   ALA A 187     90.627  15.180  -7.200  1.00 18.33 A
  15  ATOM    967  CA  ALA A 187     89.984  14.043  -7.841  1.00 18.09 A
      ATOM    968  CB  ALA A 187     91.024  13.035  -8.276  1.00 19.99 A
      ATOM    969  C   ALA A 187     88.986  13.402  -6.886  1.00 18.07 A
      ATOM    970  O   ALA A 187     87.873  13.055  -7.291  1.00 18.54 A
      ATOM    971  N   GLU A 188     89.366  13.253  -5.617  1.00 16.56 A
  20  ATOM    972  CA  GLU A 188     88.446  12.660  -4.653  1.00 16.18 A
      ATOM    973  CB  GLU A 188     89.099  12.495  -3.280  1.00 15.52 A
      ATOM    974  CG  GLU A 188     90.266  11.519  -3.259  1.00 20.99 A
      ATOM    975  CD  GLU A 188     90.297  10.636  -2.013  1.00 22.64 A
      ATOM    976  OE1 GLU A 188     90.006  11.126  -0.899  1.00 22.95 A
  25  ATOM    977  OE2 GLU A 188     90.629   9.439  -2.149  1.00 27.37 A
      ATOM    978  C   GLU A 188     87.189  13.508  -4.518  1.00 15.81 A
      ATOM    979  O   GLU A 188     86.080  12.978  -4.460  1.00 15.92 A
      ATOM    980  N   ILE A 189     87.364  14.825  -4.483  1.00 16.14 A
      ATOM    981  CA  ILE A 189     86.235  15.733  -4.346  1.00 16.66 A
  30  ATOM    982  CB  ILE A 189     86.698  17.179  -4.083  1.00 16.57 A
      ATOM    983  CG2 ILE A 189     85.485  18.098  -3.958  1.00 14.92 A
      ATOM    984  CG1 ILE A 189     87.502  17.235  -2.784  1.00 16.19 A
      ATOM    985  CD1 ILE A 189     88.202  18.559  -2.547  1.00 16.78 A
      ATOM    986  C   ILE A 189     85.349  15.712  -5.580  1.00 16.29 A
  35  ATOM    987  O   ILE A 189     84.123  15.667  -5.471  1.00 15.80 A
      ATOM    988  N   VAL A 190     85.962  15.743  -6.755  1.00 16.44 A
      ATOM    989  CA  VAL A 190     85.186  15.704  -7.985  1.00 15.98 A
      ATOM    990  CB  VAL A 190     86.101  15.692  -9.229  1.00 17.23 A
      ATOM    991  CG1 VAL A 190     85.280  15.380 -10.488  1.00 16.01 A
  40  ATOM    992  CG2 VAL A 190     86.797  17.034  -9.373  1.00 13.82 A
      ATOM    993  C   VAL A 190     84.351  14.433  -7.979  1.00 15.64 A
      ATOM    994  O   VAL A 190     83.140  14.462  -8.194  1.00 15.64 A
      ATOM    995  N   SER A 191     85.011  13.312  -7.723  1.00 18.94 A
      ATOM    996  CA  SER A 191     84.337  12.015  -7.692  1.00 18.50 A
  45  ATOM    997  CB  SER A 191     85.357  10.914  -7.427  1.00 19.04 A
      ATOM    998  OG  SER A 191     84.712   9.680  -7.206  1.00 23.87 A
      ATOM    999  C   SER A 191     83.233  11.961  -6.642  1.00 16.85 A
      ATOM   1000  O   SER A 191     82.227  11.281  -6.818  1.00 18.11 A
      ATOM   1001  N   ALA A 192     83.419  12.671  -5.540  1.00 17.37 A
  50  ATOM   1002  CA  ALA A 192     82.395  12.687  -4.501  1.00 17.10 A
      ATOM   1003  CB  ALA A 192     82.947  13.302  -3.222  1.00 17.08 A
      ATOM   1004  C   ALA A 192     81.218  13.511  -5.020  1.00 18.24 A
      ATOM   1005  O   ALA A 192     80.055  13.162  -4.798  1.00 18.91 A
      ATOM   1006  N   LEU A 193     81.524  14.597  -5.725  1.00 16.53 A
  55  ATOM   1007  CA  LEU A 193     80.483  15.453  -6.270  1.00 17.25 A
      ATOM   1008  CB  LEU A 193     81.091  16.750  -6.826  1.00 17.70 A
      ATOM   1009  CG  LEU A 193     81.537  17.738  -5.732  1.00 22.88 A
      ATOM   1010  CD1 LEU A 193     82.094  19.018  -6.348  1.00 22.13 A
      ATOM   1011  CD2 LEU A 193     80.345  18.057  -4.839  1.00 20.04 A
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     ATOM   1012  C    LEU A 193     79.664  14.737  -7.343  1.00 17.26 A
     ATOM   1013  O    LEU A 193     78.442  14.893  -7.402  1.00 15.43 A
     ATOM   1014  N    GLU A 194     80.330  13.962  -8.195  1.00 16.22 A
     ATOM   1015  CA   GLU A 194     79.612  13.232  -9.225  1.00 19.22 A
 5   ATOM   1016  CB   GLU A 194     80.564  12.405 -10.086  1.00 20.77 A
     ATOM   1017  CG   GLU A 194     79.828  11.403 -10.978  1.00 26.27 A
     ATOM   1018  CD   GLU A 194     80.756  10.667 -11.934  1.00 29.43 A
     ATOM   1019  OE1  GLU A 194     81.840  10.222 -11.489  1.00 28.21 A
     ATOM   1020  OE2  GLU A 194     80.392  10.532 -13.127  1.00 31.66 A
10   ATOM   1021  C    GLU A 194     78.599  12.303  -8.566  1.00 19.71 A
     ATOM   1022  O    GLU A 194     77.466  12.159  -9.027  1.00 18.40 A
     ATOM   1023  N    TYR A 195     79.012  11.672  -7.479  1.00 19.22 A
     ATOM   1024  CA   TYR A 195     78.116  10.773  -6.781  1.00 19.69 A
     ATOM   1025  CB   TYR A 195     78.867  10.041  -5.667  1.00 21.39 A
15   ATOM   1026  CG   TYR A 195     77.975   9.143  -4.847  1.00 22.55 A
     ATOM   1027  CD1  TYR A 195     77.596   7.881  -5.316  1.00 23.14 A
     ATOM   1028  CE1  TYR A 195     76.743   7.065  -4.577  1.00 22.98 A
     ATOM   1029  CD2  TYR A 195     77.479   9.564  -3.618  1.00 21.58 A
     ATOM   1030  CE2  TYR A 195     76.625   8.755  -2.872  1.00 23.50 A
20   ATOM   1031  CZ   TYR A 195     76.263   7.512  -3.358  1.00 23.18 A
     ATOM   1032  OH   TYR A 195     75.413   6.732  -2.632  1.00 24.19 A
     ATOM   1033  C    TYR A 195     76.939  11.546  -6.172  1.00 18.80 A
     ATOM   1034  O    TYR A 195     75.782  11.164  -6.337  1.00 19.89 A
     ATOM   1035  N    LEU A 196     77.242  12.629  -5.469  1.00 15.26 A
25   ATOM   1036  CA   LEU A 196     76.210  13.430  -4.813  1.00 16.52 A
     ATOM   1037  CB   LEU A 196     76.855  14.586  -4.038  1.00 15.67 A
     ATOM   1038  CG   LEU A 196     75.923  15.401  -3.131  1.00 19.13 A
     ATOM   1039  CD1  LEU A 196     75.555  14.571  -1.903  1.00 18.42 A
     ATOM   1040  CD2  LEU A 196     76.604  16.681  -2.689  1.00 18.50 A
30   ATOM   1041  C    LEU A 196     75.209  13.993  -5.814  1.00 18.12 A
     ATOM   1042  O    LEU A 196     73.990  13.892  -5.637  1.00 16.25 A
     ATOM   1043  N    HIS A 197     75.732  14.592  -6.875  1.00 17.99 A
     ATOM   1044  CA   HIS A 197     74.873  15.171  -7.878  1.00 20.69 A
     ATOM   1045  CB   HIS A 197     75.715  16.004  -8.832  1.00 19.71 A
35   ATOM   1046  CG   HIS A 197     76.292  17.224  -8.190  1.00 19.55 A
     ATOM   1047  CD2  HIS A 197     76.069  17.777  -6.973  1.00 18.32 A
     ATOM   1048  ND1  HIS A 197     77.172  18.063  -8.837  1.00 20.26 A
     ATOM   1049  CE1  HIS A 197     77.443  19.084  -8.049  1.00 20.73 A
     ATOM   1050  NE2  HIS A 197     76.806  18.935  -6.913  1.00 19.92 A
40   ATOM   1051  C    HIS A 197     74.091  14.093  -8.609  1.00 22.80 A
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     ATOM   1053  N    GLY A 198     74.672  12.903  -8.697  1.00 23.17 A
     ATOM   1054  CA   GLY A 198     73.990  11.815  -9.366  1.00 25.22 A
     ATOM   1055  C    GLY A 198     72.718  11.436  -8.631  1.00 27.16 A
45   ATOM   1056  O    GLY A 198     71.837  10.787  -9.185  1.00 27.89 A
     ATOM   1057  N    LYS A 199     72.623  11.831  -7.369  1.00 27.84 A
     ATOM   1058  CA   LYS A 199     71.429  11.532  -6.587  1.00 28.20 A
     ATOM   1059  CB   LYS A 199     71.827  10.952  -5.227  1.00 29.35 A
     ATOM   1060  CG   LYS A 199     72.278   9.502  -5.321  1.00 32.74 A
50   ATOM   1061  CD   LYS A 199     72.737   8.944  -3.990  1.00 38.22 A
     ATOM   1062  CE   LYS A 199     72.600   7.424  -3.965  1.00 41.17 A
     ATOM   1063  NZ   LYS A 199     73.173   6.779  -5.185  1.00 44.70 A
     ATOM   1064  C    LYS A 199     70.542  12.765  -6.419  1.00 26.97 A
     ATOM   1065  O    LYS A 199     69.678  12.807  -5.551  1.00 28.27 A
55   ATOM   1066  N    GLY A 200     70.759  13.762  -7.269  1.00 25.99 A
     ATOM   1067  CA   GLY A 200     69.963  14.972  -7.222  1.00 24.75 A
     ATOM   1068  C    GLY A 200     70.070  15.713  -5.908  1.00 25.82 A
     ATOM   1069  O    GLY A 200     69.080  16.241  -5.401  1.00 26.10 A
     ATOM   1070  N    ILE A 201     71.275  15.759  -5.353  1.00 25.31 A
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      ATOM   1071  CA   ILE A 201      71.490  16.440  -4.089  1.00 26.11 A
      ATOM   1072  CB   ILE A 201      71.886  15.438  -2.983  1.00 27.58 A
      ATOM   1073  CG2  ILE A 201      72.242  16.175  -1.704  1.00 27.99 A
      ATOM   1074  CG1  ILE A 201      70.725  14.480  -2.719  1.00 27.89 A
5     ATOM   1075  CD1  ILE A 201      71.068  13.366  -1.746  1.00 30.62 A
      ATOM   1076  C    ILE A 201      72.576  17.489  -4.233  1.00 25.92 A
      ATOM   1077  O    ILE A 201      73.599  17.269  -4.887  1.00 25.94 A
      ATOM   1078  N    ILE A 202      72.337  18.640  -3.627  1.00 25.96 A
      ATOM   1079  CA   ILE A 202      73.289  19.733  -3.680  1.00 26.57 A
10    ATOM   1080  CB   ILE A 202      72.640  20.990  -4.286  1.00 27.69 A
      ATOM   1081  CG2  ILE A 202      73.695  22.068  -4.516  1.00 30.47 A
      ATOM   1082  CG1  ILE A 202      71.992  20.639  -5.625  1.00 30.89 A
      ATOM   1083  CD1  ILE A 202      71.083  21.736  -6.178  1.00 31.79 A
      ATOM   1084  C    ILE A 202      73.742  20.032  -2.252  1.00 26.14 A
15    ATOM   1085  O    ILE A 202      72.912  20.201  -1.351  1.00 24.75 A
      ATOM   1086  N    HIS A 203      75.054  20.075  -2.042  1.00 25.17 A
      ATOM   1087  CA   HIS A 203      75.585  20.362  -0.717  1.00 24.36 A
      ATOM   1088  CB   HIS A 203      77.095  20.131  -0.677  1.00 23.06 A
      ATOM   1089  CG   HIS A 203      77.680  20.268   0.694  1.00 24.09 A
20    ATOM   1090  CD2  HIS A 203      77.956  21.366   1.434  1.00 22.36 A
      ATOM   1091  ND1  HIS A 203      77.981  19.183   1.490  1.00 23.65 A
      ATOM   1092  CE1  HIS A 203      78.418  19.607   2.661  1.00 23.87 A
      ATOM   1093  NE2  HIS A 203      78.412  20.929   2.653  1.00 25.12 A
      ATOM   1094  C    HIS A 203      75.269  21.811  -0.330  1.00 24.71 A
25    ATOM   1095  O    HIS A 203      74.633  22.055   0.693  1.00 24.27 A
      ATOM   1096  N    ARG A 204      75.724  22.758  -1.154  1.00 25.89 A
      ATOM   1097  CA   ARG A 204      75.490  24.199  -0.961  1.00 25.68 A
      ATOM   1098  CB   ARG A 204      74.033  24.471  -0.596  1.00 25.57 A
      ATOM   1099  CG   ARG A 204      73.079  24.319  -1.751  1.00 29.26 A
30    ATOM   1100  CD   ARG A 204      71.815  25.118  -1.509  1.00 29.86 A
      ATOM   1101  NE   ARG A 204      71.065  24.603  -0.373  1.00 33.90 A
      ATOM   1102  CZ   ARG A 204      70.021  25.219   0.170  1.00 36.01 A
      ATOM   1103  NH1  ARG A 204      69.607  26.383  -0.322  1.00 37.08 A
      ATOM   1104  NH2  ARG A 204      69.387  24.668   1.197  1.00 34.14 A
35    ATOM   1105  C    ARG A 204      76.373  24.935   0.034  1.00 26.91 A
      ATOM   1106  O    ARG A 204      76.210  26.144   0.243  1.00 26.29 A
      ATOM   1107  N    ASP A 205      77.303  24.221   0.654  1.00 26.23 A
      ATOM   1108  CA   ASP A 205      78.203  24.849   1.604  1.00 24.46 A
      ATOM   1109  CB   ASP A 205      77.557  24.909   2.990  1.00 28.25 A
40    ATOM   1110  CG   ASP A 205      78.203  25.954   3.890  1.00 30.95 A
      ATOM   1111  OD1  ASP A 205      78.872  26.862   3.354  1.00 35.13 A
      ATOM   1112  OD2  ASP A 205      78.034  25.880   5.127  1.00 33.48 A
      ATOM   1113  C    ASP A 205      79.483  24.039   1.631  1.00 24.22 A
      ATOM   1114  O    ASP A 205      79.998  23.676   2.685  1.00 23.62 A
45    ATOM   1115  N    LEU A 206      79.995  23.755   0.442  1.00 23.31 A
      ATOM   1116  CA   LEU A 206      81.206  22.978   0.321  1.00 24.19 A
      ATOM   1117  CB   LEU A 206      81.311  22.406  -1.088  1.00 24.78 A
      ATOM   1118  CG   LEU A 206      82.353  21.309  -1.285  1.00 25.24 A
      ATOM   1119  CD1  LEU A 206      82.075  20.173  -0.317  1.00 26.72 A
50    ATOM   1120  CD2  LEU A 206      82.298  20.808  -2.720  1.00 24.32 A
      ATOM   1121  C    LEU A 206      82.408  23.853   0.623  1.00 24.52 A
      ATOM   1122  O    LEU A 206      82.508  24.977   0.130  1.00 24.34 A
      ATOM   1123  N    LYS A 207      83.328  23.330   1.424  1.00 22.98 A
      ATOM   1124  CA   LYS A 207      84.517  24.083   1.796  1.00 23.05 A
55    ATOM   1125  CB   LYS A 207      84.113  25.305   2.629  1.00 21.18 A
      ATOM   1126  CG   LYS A 207      83.278  24.948   3.830  1.00 19.29 A
      ATOM   1127  CD   LYS A 207      82.775  26.179   4.568  1.00 23.68 A
      ATOM   1128  CE   LYS A 207      81.913  25.781   5.767  1.00 21.99 A
      ATOM   1129  NZ   LYS A 207      81.580  26.910   6.686  1.00 25.14 A
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      ATOM   1130  C    LYS A 207      85.444  23.183   2.602  1.00 23.54 A
      ATOM   1131  O    LYS A 207      85.014  22.169   3.144  1.00 26.04 A
      ATOM   1132  N    PRO A 208      86.728  23.550   2.697  1.00 23.78 A
      ATOM   1133  CD   PRO A 208      87.309  24.764   2.100  1.00 21.90 A
   5  ATOM   1134  CA   PRO A 208      87.754  22.801   3.429  1.00 23.64 A
      ATOM   1135  CB   PRO A 208      88.948  23.750   3.397  1.00 22.67 A
      ATOM   1136  CG   PRO A 208      88.779  24.432   2.084  1.00 23.00 A
      ATOM   1137  C    PRO A 208      87.393  22.390   4.859  1.00 24.47 A
      ATOM   1138  O    PRO A 208      87.890  21.378   5.358  1.00 24.20 A
  10  ATOM   1139  N    GLU A 209      86.541  23.176   5.514  1.00 25.33 A
      ATOM   1140  CA   GLU A 209      86.132  22.903   6.894  1.00 26.78 A
      ATOM   1141  CB   GLU A 209      85.641  24.190   7.570  1.00 27.82 A
      ATOM   1142  CG   GLU A 209      86.616  25.359   7.479  1.00 34.76 A
      ATOM   1143  CD   GLU A 209      86.459  26.183   6.199  1.00 39.84 A
  15  ATOM   1144  OE1  GLU A 209      86.575  25.628   5.079  1.00 38.56 A
      ATOM   1145  OE2  GLU A 209      86.219  27.405   6.322  1.00 44.97 A
      ATOM   1146  C    GLU A 209      85.039  21.840   6.972  1.00 26.70 A
      ATOM   1147  O    GLU A 209      84.786  21.269   8.035  1.00 29.33 A
      ATOM   1148  N    ASN A 210      84.395  21.583   5.841  1.00 24.55 A
  20  ATOM   1149  CA   ASN A 210      83.339  20.587   5.751  1.00 24.33 A
      ATOM   1150  CB   ASN A 210      82.195  21.105   4.866  1.00 27.29 A
      ATOM   1151  CG   ASN A 210      81.225  21.998   5.622  1.00 31.63 A
      ATOM   1152  OD1  ASN A 210      80.280  22.539   5.040  1.00 35.25 A
      ATOM   1153  ND2  ASN A 210      81.449  22.155   6.923  1.00 30.78 A
  25  ATOM   1154  C    ASN A 210      83.885  19.289   5.158  1.00 22.61 A
      ATOM   1155  O    ASN A 210      83.207  18.268   5.155  1.00 19.95 A
      ATOM   1156  N    ILE A 211      85.105  19.344   4.638  1.00 22.15 A
      ATOM   1157  CA   ILE A 211      85.733  18.174   4.043  1.00 21.36 A
      ATOM   1158  CB   ILE A 211      86.467  18.538   2.744  1.00 20.33 A
  30  ATOM   1159  CG2  ILE A 211      87.167  17.315   2.180  1.00 20.04 A
      ATOM   1160  CG1  ILE A 211      85.475  19.089   1.719  1.00 19.57 A
      ATOM   1161  CD1  ILE A 211      86.162  19.718   0.517  1.00 20.56 A
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      ATOM   1163  O    ILE A 211      87.805  18.209   5.254  1.00 21.87 A
  35  ATOM   1164  N    LEU A 212      86.377  16.510   5.670  1.00 21.03 A
      ATOM   1165  CA   LEU A 212      87.228  15.910   6.685  1.00 20.43 A
      ATOM   1166  CB   LEU A 212      86.352  15.331   7.801  1.00 19.57 A
      ATOM   1167  CG   LEU A 212      85.270  16.281   8.347  1.00 19.01 A
      ATOM   1168  CD1  LEU A 212      84.543  15.613   9.494  1.00 16.54 A
  40  ATOM   1169  CD2  LEU A 212      85.903  17.592   8.817  1.00 19.58 A
      ATOM   1170  C    LEU A 212      88.148  14.833   6.139  1.00 20.95 A
      ATOM   1171  O    LEU A 212      88.034  14.420   4.983  1.00 20.16 A
      ATOM   1172  N    LEU A 213      89.069  14.379   6.978  1.00 21.07 A
      ATOM   1173  CA   LEU A 213      89.991  13.330   6.578  1.00 21.58 A
  45  ATOM   1174  CB   LEU A 213      91.415  13.882   6.520  1.00 21.17 A
      ATOM   1175  CG   LEU A 213      91.633  14.944   5.440  1.00 21.26 A
      ATOM   1176  CD1  LEU A 213      93.051  15.466   5.514  1.00 23.93 A
      ATOM   1177  CD2  LEU A 213      91.378  14.335   4.070  1.00 23.36 A
      ATOM   1178  C    LEU A 213      89.912  12.161   7.554  1.00 22.28 A
  50  ATOM   1179  O    LEU A 213      89.948  12.354   8.766  1.00 23.80 A
      ATOM   1180  N    ASN A 214      89.786  10.949   7.025  1.00 22.96 A
      ATOM   1181  CA   ASN A 214      89.718   9.766   7.872  1.00 22.83 A
      ATOM   1182  CB   ASN   214      88.997   8.647   7.103  0.50 23.75 AC1
      ATOM   1183  CG   ASN   214      89.144   7.286   7.756  0.50 25.62 AC1
  55  ATOM   1184  OD1  ASN   214      90.212   6.673   7.713  0.50 25.34 AC1
      ATOM   1185  ND2  ASN   214      88.066   6.803   8.363  0.50 26.41 AC1
      ATOM   1186  C    ASN A 214      91.151   9.354   8.228  1.00 23.68 A
      ATOM   1187  O    ASN A 214      92.112   9.934   7.716  1.00 20.85 A
      ATOM   1188  N    GLU A 215      91.291   8.379   9.119  1.00 25.06 A
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ATOM	1189	CA	GLU A 215	92.603	7.901	9.545	1.00	26.20 A
ATOM	1190	CB	GLU A 215	92.453	6.669	10.435	1.00	26.19 A
ATOM	1191	CG	GLU A 215	93.770	6.153	10.985	1.00	29.08 A
ATOM	1192	CD	GLU A 215	93.589	4.963	11.907	0.00	28.21 A
5	ATOM	1193	OE1	GLU A 215	93.064	3.927	11.449	0.00	28.42 A
ATOM	1194	OE2	GLU A 215	93.973	5.065	13.092	0.00	28.42 A
ATOM	1195	C	GLU A 215	93.532	7.566	8.385	1.00	26.12 A
ATOM	1196	O	GLU A 215	94.746	7.743	8.487	1.00	25.58 A
ATOM	1197	N	ASP A 216	92.976	7.070	7.287	1.00	25.52 A
10	ATOM	1198	CA	ASP A 216	93.798	6.728	6.133	1.00	25.79 A
ATOM	1199	CB	ASP 216	93.164	5.564	5.376	0.50	27.09 AC1
ATOM	1200	CG	ASP 216	93.450	4.231	6.027	0.50	29.11 AC1
ATOM	1201	OD1	ASP 216	93.206	4.098	7.244	0.50	31.09 AC1
ATOM	1202	OD2	ASP 216	93.921	3.315	5.320	0.50	31.52 AC1
15	ATOM	1203	C	ASP A 216	94.034	7.896	5.173	1.00	24.88 A
ATOM	1204	O	ASP A 216	94.586	7.719	4.094	1.00	26.27 A
ATOM	1205	N	MET A 217	93.615	9.087	5.578	1.00	25.04 A
ATOM	1206	CA	MET A 217	93.789	10.301	4.792	1.00	24.86 A
ATOM	1207	CB	MET A 217	95.270	10.503	4.454	1.00	28.81 A
20	ATOM	1208	CG	MET A 217	96.139	10.834	5.676	1.00	29.66 A
ATOM	1209	SD	MET A 217	95.577	12.323	6.551	1.00	34.79 A
ATOM	1210	CE	MET A 217	96.130	13.598	5.411	1.00	30.61 A
ATOM	1211	C	MET A 217	92.942	10.437	3.528	1.00	24.93 A
ATOM	1212	O	MET A 217	93.277	11.215	2.629	1.00	23.08 A
25	ATOM	1213	N	HIS A 218	91.855	9.678	3.450	1.00	21.48 A
ATOM	1214	CA	HIS A 218	90.947	9.799	2.319	1.00	21.72 A
ATOM	1215	CB	HIS A 218	90.325	8.444	1.963	1.00	21.43 A
ATOM	1216	CG	HIS A 218	91.225	7.578	1.138	1.00	24.55 A
ATOM	1217	CD2	HIS A 218	91.951	6.478	1.458	1.00	23.50 A
30	ATOM	1218	ND1	HIS A 218	91.522	7.860	-0.179	1.00	23.64 A
ATOM	1219	CE1	HIS A 218	92.392	6.975	-0.633	1.00	21.12 A
ATOM	1220	NE2	HIS A 218	92.670	6.128	0.340	1.00	22.96 A
ATOM	1221	C	HIS A 218	89.891	10.785	2.812	1.00	20.49 A
ATOM	1222	O	HIS A 218	89.683	10.911	4.018	1.00	20.60 A
35	ATOM	1223	N	ILE A 219	89.231	11.488	1.897	1.00	18.82 A
ATOM	1224	CA	ILE A 219	88.244	12.473	2.306	1.00	17.27 A
ATOM	1225	CB	ILE A 219	87.914	13.487	1.178	1.00	15.59 A
ATOM	1226	CG2	ILE A 219	89.175	14.201	0.718	1.00	14.62 A
ATOM	1227	CG1	ILE A 219	87.252	12.769	0.006	1.00	16.04 A
40	ATOM	1228	CD1	ILE A 219	86.458	13.685	-0.888	1.00	15.29 A
ATOM	1229	C	ILE A 219	86.934	11.885	2.772	1.00	17.64 A
ATOM	1230	O	ILE A 219	86.564	10.774	2.402	1.00	18.93 A
ATOM	1231	N	GLN A 220	86.240	12.658	3.597	1.00	19.19 A
45	ATOM	1232	CA	GLN A 220	84.933	12.293	4.119	1.00	21.50 A
ATOM	1233	CB	GLN A 220	85.061	11.585	5.475	1.00	23.96 A
ATOM	1234	CG	GLN A 220	85.583	10.151	5.334	1.00	29.77 A
ATOM	1235	CD	GLN A 220	84.945	9.182	6.319	1.00	33.77 A
ATOM	1236	OE1	GLN A 220	85.257	9.188	7.513	1.00	37.87 A
ATOM	1237	NE2	GLN A 220	84.040	8.347	5.821	1.00	34.29 A
50	ATOM	1238	C	GLN A 220	84.158	13.599	4.240	1.00	21.53 A
ATOM	1239	O	GLN A 220	84.367	14.393	5.166	1.00	22.54 A
ATOM	1240	N	ILE A 221	83.284	13.833	3.270	1.00	19.63 A
ATOM	1241	CA	ILE A 221	82.498	15.054	3.234	1.00	19.30 A
ATOM	1242	CB	ILE A 221	82.055	15.366	1.785	1.00	20.41 A
55	ATOM	1243	CG2	ILE A 221	81.237	16.639	1.738	1.00	19.39 A
ATOM	1244	CG1	ILE A 221	83.290	15.524	0.900	1.00	19.44 A
ATOM	1245	CD1	ILE A 221	82.977	15.802	-0.550	1.00	17.44 A
ATOM	1246	C	ILE A 221	81.284	14.951	4.141	1.00	18.36 A
ATOM	1247	O	ILE A 221	80.627	13.911	4.204	1.00	15.98 A

	ATOM	1248	N	THR A 222	80.995	16.024	4.864	1.00	19.59	A
	ATOM	1249	CA	THR A 222	79.844	16.008	5.753	1.00	22.76	A
	ATOM	1250	CB	THR A 222	80.218	15.420	7.126	1.00	23.86	A
	ATOM	1251	OG1	THR A 222	79.019	15.145	7.863	1.00	28.20	A
5	ATOM	1252	CG2	THR A 222	81.105	16.380	7.908	1.00	23.65	A
	ATOM	1253	C	THR A 222	79.179	17.370	5.933	1.00	23.55	A
	ATOM	1254	O	THR A 222	79.505	18.334	5.229	1.00	25.65	A
	ATOM	1255	N	ASP A 223	78.248	17.427	6.881	1.00	24.38	A
	ATOM	1256	CA	ASP A 223	77.449	18.611	7.202	1.00	25.25	A
10	ATOM	1257	CB	ASP A 223	78.303	19.865	7.422	1.00	26.12	A
	ATOM	1258	CG	ASP A 223	77.538	20.962	8.175	1.00	29.92	A
	ATOM	1259	OD1	ASP A 223	76.288	20.876	8.278	1.00	31.91	A
	ATOM	1260	OD2	ASP A 223	78.177	21.911	8.671	1.00	32.94	A
	ATOM	1261	C	ASP A 223	76.461	18.882	6.080	1.00	25.61	A
15	ATOM	1262	O	ASP A 223	76.693	19.744	5.227	1.00	25.81	A
	ATOM	1263	N	PHE A 224	75.358	18.139	6.098	1.00	25.18	A
	ATOM	1264	CA	PHE A 224	74.310	18.266	5.096	1.00	26.75	A
	ATOM	1265	CB	PHE A 224	73.860	16.879	4.635	1.00	27.24	A
	ATOM	1266	CG	PHE A 224	74.857	16.189	3.753	1.00	28.10	A
20	ATOM	1267	CD1	PHE A 224	74.889	16.450	2.388	1.00	29.12	A
	ATOM	1268	CD2	PHE A 224	75.790	15.313	4.291	1.00	28.67	A
	ATOM	1269	CE1	PHE A 224	75.841	15.847	1.567	1.00	30.28	A
	ATOM	1270	CE2	PHE A 224	76.745	14.706	3.482	1.00	31.49	A
	ATOM	1271	CZ	PHE A 224	76.770	14.973	2.117	1.00	30.54	A
25	ATOM	1272	C	PHE A 224	73.124	19.038	5.632	1.00	27.73	A
	ATOM	1273	O	PHE A 224	72.005	18.895	5.140	1.00	27.84	A
	ATOM	1274	N	GLY A 225	73.378	19.862	6.643	1.00	29.36	A
	ATOM	1275	CA	GLY A 225	72.319	20.656	7.235	1.00	30.10	A
	ATOM	1276	C	GLY A 225	71.825	21.741	6.297	1.00	31.32	A
30	ATOM	1277	O	GLY A 225	70.714	22.248	6.451	1.00	32.90	A
	ATOM	1278	N	THR A 226	72.640	22.091	5.311	1.00	29.95	A
	ATOM	1279	CA	THR A 226	72.261	23.132	4.365	1.00	32.06	A
	ATOM	1280	CB	THR A 226	73.381	24.167	4.226	1.00	33.35	A
	ATOM	1281	OG1	THR A 226	74.454	23.608	3.455	1.00	35.74	A
35	ATOM	1282	CG2	THR A 226	73.920	24.542	5.593	1.00	34.02	A
	ATOM	1283	C	THR A 226	71.979	22.551	2.983	1.00	31.11	A
	ATOM	1284	O	THR A 226	71.801	23.288	2.012	1.00	30.89	A
	ATOM	1285	N	ALA A 227	71.938	21.230	2.899	1.00	30.02	A
	ATOM	1286	CA	ALA A 227	71.714	20.566	1.624	1.00	32.20	A
40	ATOM	1287	CB	ALA A 227	71.906	19.057	1.770	1.00	29.19	A
	ATOM	1288	C	ALA A 227	70.345	20.865	1.045	1.00	32.77	A
	ATOM	1289	O	ALA A 227	69.431	21.269	1.761	1.00	34.17	A
	ATOM	1290	N	ALA A 228	70.229	20.684	-0.266	1.00	33.18	A
	ATOM	1291	CA	ALA A 228	68.980	20.902	-0.982	1.00	34.43	A
45	ATOM	1292	CB	ALA A 228	69.079	22.146	-1.861	1.00	32.03	A
	ATOM	1293	C	ALA A 228	68.742	19.674	-1.846	1.00	35.25	A
	ATOM	1294	O	ALA A 228	69.612	19.284	-2.622	1.00	36.70	A
	ATOM	1295	N	VAL A 229	67.578	19.056	-1.698	1.00	36.21	A
	ATOM	1296	CA	VAL A 229	67.246	17.876	-2.488	1.00	37.95	A
50	ATOM	1297	CB	VAL A 229	66.438	16.857	-1.674	1.00	37.37	A
	ATOM	1298	CG1	VAL A 229	66.192	15.609	-2.506	1.00	35.62	A
	ATOM	1299	CG2	VAL A 229	67.176	16.522	-0.394	1.00	36.39	A
	ATOM	1300	C	VAL A 229	66.393	18.341	-3.649	1.00	40.15	A
	ATOM	1301	O	VAL A 229	65.353	18.965	-3.446	1.00	39.20	A
55	ATOM	1302	N	LEU A 230	66.836	18.044	-4.865	1.00	43.75	A
	ATOM	1303	CA	LEU A 230	66.105	18.455	-6.054	1.00	48.04	A
	ATOM	1304	CB	LEU A 230	67.039	18.473	-7.258	1.00	48.59	A
	ATOM	1305	CG	LEU A 230	68.123	19.552	-7.212	1.00	50.35	A
	ATOM	1306	CD1	LEU A 230	69.118	19.312	-8.326	1.00	50.62	A

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      ATOM   1307  CD2 LEU A 230       67.488  20.932  -7.330  1.00 50.11 A
      ATOM   1308  C   LEU A 230       64.905  17.569  -6.346  1.00 51.38 A
      ATOM   1309  O   LEU A 230       64.929  16.364  -6.095  1.00 51.84 A
      ATOM   1310  N   SER A 231       63.854  18.190  -6.872  1.00 56.03 A
 5    ATOM   1311  CA  SER A 231       62.616  17.502  -7.224  1.00 60.24 A
      ATOM   1312  CB  SER A 231       61.528  17.806  -6.186  1.00 60.77 A
      ATOM   1313  OG  SER A 231       61.222  19.192  -6.150  1.00 61.08 A
      ATOM   1314  C   SER A 231       62.115  17.894  -8.622  1.00 62.65 A
      ATOM   1315  O   SER A 231       61.527  17.068  -9.326  1.00 63.42 A
 10   ATOM   1316  N   PRO A 232       62.334  19.161  -9.040  1.00 64.66 A
      ATOM   1317  CD  PRO A 232       62.903  20.298  -8.289  1.00 64.95 A
      ATOM   1318  CA  PRO A 232       61.882  19.604 -10.367  1.00 65.69 A
      ATOM   1319  CB  PRO A 232       62.409  21.037 -10.450  1.00 65.77 A
      ATOM   1320  CG  PRO A 232       62.341  21.493  -9.031  1.00 65.52 A
 15   ATOM   1321  C   PRO A 232       62.408  18.731 -11.505  1.00 66.28 A
      ATOM   1322  O   PRO A 232       62.858  19.241 -12.532  1.00 66.55 A
      ATOM   1323  N   ALA A 239       65.927  26.021  -3.995  1.00 92.57 A
      ATOM   1324  CA  ALA A 239       67.330  26.100  -3.606  1.00 92.64 A
      ATOM   1325  CB  ALA A 239       68.187  25.262  -4.558  1.00 92.15 A
 20   ATOM   1326  C   ALA A 239       67.769  27.558  -3.640  1.00 92.34 A
      ATOM   1327  O   ALA A 239       68.683  27.930  -4.373  1.00 92.47 A
      ATOM   1328  N   ASN A 240       67.108  28.379  -2.833  1.00 91.92 A
      ATOM   1329  CA  ASN A 240       67.396  29.809  -2.767  1.00 91.12 A
      ATOM   1330  CB  ASN A 240       66.374  30.566  -3.617  1.00 92.32 A
 25   ATOM   1331  CG  ASN A 240       64.947  30.084  -3.378  1.00 93.20 A
      ATOM   1332  OD1 ASN A 240       64.471  30.061  -2.244  1.00 93.46 A
      ATOM   1333  ND2 ASN A 240       64.261  29.697  -4.452  1.00 94.00 A
      ATOM   1334  C   ASN A 240       67.334  30.332  -1.335  1.00 89.78 A
      ATOM   1335  O   ASN A 240       67.766  31.453  -1.053  1.00 89.80 A
 30   ATOM   1336  N   ALA A 241       66.787  29.515  -0.441  1.00 88.16 A
      ATOM   1337  CA  ALA A 241       66.624  29.891   0.955  1.00 86.55 A
      ATOM   1338  C   ALA A 241       67.901  29.893   1.792  1.00 84.55 A
      ATOM   1339  O   ALA A 241       67.865  30.268   2.961  1.00 84.76 A
      ATOM   1340  CB  ALA A 241       65.583  28.978   1.623  1.00 88.01 A
 35   ATOM   1341  N   PHE A 242       69.028  29.494   1.216  1.00 82.28 A
      ATOM   1342  CA  PHE A 242       70.264  29.483   1.993  1.00 79.83 A
      ATOM   1343  CB  PHE A 242       70.718  28.046   2.282  1.00 79.60 A
      ATOM   1344  CG  PHE A 242       71.980  27.962   3.100  1.00 79.10 A
      ATOM   1345  CD1 PHE A 242       72.024  28.483   4.388  1.00 79.45 A
 40   ATOM   1346  CD2 PHE A 242       73.131  27.392   2.571  1.00 79.42 A
      ATOM   1347  CE1 PHE A 242       73.202  28.442   5.143  1.00 79.29 A
      ATOM   1348  CE2 PHE A 242       74.314  27.345   3.317  1.00 80.20 A
      ATOM   1349  CZ  PHE A 242       74.388  27.872   4.605  1.00 79.98 A
      ATOM   1350  C   PHE A 242       71.402  30.231   1.322  1.00 77.56 A
 45   ATOM   1351  O   PHE A 242       71.347  30.524   0.130  1.00 78.59 A
      ATOM   1352  N   VAL A 243       72.440  30.529   2.098  1.00 73.76 A
      ATOM   1353  CA  VAL A 243       73.595  31.238   1.579  1.00 70.34 A
      ATOM   1354  CB  VAL A 243       73.864  32.515   2.405  1.00 71.71 A
      ATOM   1355  CG1 VAL A 243       75.087  33.238   1.859  1.00 71.29 A
 50   ATOM   1356  CG2 VAL A 243       72.638  33.425   2.376  1.00 71.41 A
      ATOM   1357  C   VAL A 243       74.851  30.362   1.581  1.00 66.69 A
      ATOM   1358  O   VAL A 243       75.232  29.802   0.552  1.00 66.50 A
      ATOM   1359  N   GLY A 244       75.496  30.245   2.737  1.00 62.34 A
      ATOM   1360  CA  GLY A 244       76.708  29.444   2.829  1.00 56.48 A
 55   ATOM   1361  C   GLY A 244       77.889  30.327   3.168  1.00 52.17 A
      ATOM   1362  O   GLY A 244       77.769  31.547   3.136  1.00 52.14 A
      ATOM   1363  N   THR A 245       79.031  29.733   3.490  1.00 48.25 A
      ATOM   1364  CA  THR A 245       80.201  30.530   3.838  1.00 44.49 A
      ATOM   1365  CB  THR A 245       81.413  29.633   4.106  1.00 45.53 A
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     ATOM   1366   OG1  THR A 245     80.994  28.514   4.899  1.00 45.14 A
     ATOM   1367   CG2  THR A 245     82.486  30.403   4.873  1.00 42.13 A
     ATOM   1368   C    THR A 245     80.523  31.537   2.734  1.00 40.69 A
     ATOM   1369   O    THR A 245     80.722  31.175   1.572  1.00 38.45 A
  5  ATOM   1370   N    ALA A 246     80.570  32.804   3.127  1.00 36.53 A
     ATOM   1371   CA   ALA A 246     80.816  33.915   2.219  1.00 34.68 A
     ATOM   1372   CB   ALA A 246     81.106  35.186   3.023  1.00 34.13 A
     ATOM   1373   C    ALA A 246     81.896  33.718   1.164  1.00 33.21 A
     ATOM   1374   O    ALA A 246     81.655  33.958  -0.015  1.00 33.62 A
 10  ATOM   1375   N    GLN A 247     83.082  33.281   1.567  1.00 31.02 A
     ATOM   1376   CA   GLN A 247     84.151  33.112   0.595  1.00 31.05 A
     ATOM   1377   CB   GLN A 247     85.476  32.814   1.310  1.00 33.25 A
     ATOM   1378   CG   GLN A 247     85.921  33.931   2.253  1.00 37.08 A
     ATOM   1379   CD   GLN A 247     87.378  33.831   2.665  1.00 40.56 A
 15  ATOM   1380   OE1  GLN A 247     88.272  34.328   1.972  1.00 41.24 A
     ATOM   1381   NE2  GLN A 247     87.626  33.180   3.794  1.00 41.86 A
     ATOM   1382   C    GLN A 247     83.895  32.069  -0.488  1.00 28.53 A
     ATOM   1383   O    GLN A 247     84.544  32.093  -1.527  1.00 27.93 A
     ATOM   1384   N    TYR A 248     82.934  31.177  -0.267  1.00 28.01 A
 20  ATOM   1385   CA   TYR A 248     82.643  30.115  -1.238  1.00 28.20 A
     ATOM   1386   CB   TYR A 248     82.725  28.757  -0.532  1.00 24.94 A
     ATOM   1387   CG   TYR A 248     84.064  28.533   0.126  1.00 23.77 A
     ATOM   1388   CD1  TYR A 248     85.153  28.073  -0.611  1.00 23.01 A
     ATOM   1389   CE1  TYR A 248     86.421  27.975  -0.039  1.00 24.66 A
 25  ATOM   1390   CD2  TYR A 248     84.270  28.879   1.464  1.00 24.01 A
     ATOM   1391   CE2  TYR A 248     85.535  28.785   2.050  1.00 24.49 A
     ATOM   1392   CZ   TYR A 248     86.606  28.338   1.286  1.00 26.11 A
     ATOM   1393   OH   TYR A 248     87.868  28.305   1.828  1.00 27.54 A
     ATOM   1394   C    TYR A 248     81.301  30.249  -1.961  1.00 28.78 A
 30  ATOM   1395   O    TYR A 248     80.939  29.405  -2.777  1.00 30.26 A
     ATOM   1396   N    VAL A 249     80.576  31.319  -1.663  1.00 28.83 A
     ATOM   1397   CA   VAL A 249     79.281  31.584  -2.275  1.00 28.70 A
     ATOM   1398   CB   VAL A 249     78.625  32.803  -1.601  1.00 29.37 A
     ATOM   1399   CG1  VAL A 249     77.333  33.163  -2.297  1.00 30.56 A
 35  ATOM   1400   CG2  VAL A 249     78.376  32.488  -0.127  1.00 31.25 A
     ATOM   1401   C    VAL A 249     79.404  31.837  -3.779  1.00 28.19 A
     ATOM   1402   O    VAL A 249     80.335  32.497  -4.231  1.00 27.69 A
     ATOM   1403   N    SER A 250     78.460  31.308  -4.549  1.00 28.16 A
     ATOM   1404   CA   SER A 250     78.476  31.481  -5.993  1.00 29.05 A
 40  ATOM   1405   CB   SER A 250     77.835  30.273  -6.691  1.00 31.08 A
     ATOM   1406   OG   SER A 250     76.497  30.058  -6.264  1.00 31.33 A
     ATOM   1407   C    SER A 250     77.737  32.752  -6.376  1.00 29.69 A
     ATOM   1408   O    SER A 250     76.820  33.191  -5.685  1.00 29.14 A
     ATOM   1409   N    PRO A 251     78.131  33.361  -7.494  1.00 29.35 A
 45  ATOM   1410   CD   PRO A 251     79.147  32.917  -8.463  1.00 29.28 A
     ATOM   1411   CA   PRO A 251     77.477  34.592  -7.934  1.00 30.27 A
     ATOM   1412   CB   PRO A 251     78.214  34.932  -9.235  1.00 29.87 A
     ATOM   1413   CG   PRO A 251     78.687  33.588  -9.730  1.00 30.48 A
     ATOM   1414   C    PRO A 251     75.961  34.495  -8.114  1.00 30.86 A
 50  ATOM   1415   O    PRO A 251     75.246  35.442  -7.801  1.00 33.28 A
     ATOM   1416   N    GLU A 252     75.459  33.367  -8.602  1.00 30.19 A
     ATOM   1417   CA   GLU A 252     74.014  33.244  -8.802  1.00 30.91 A
     ATOM   1418   CB   GLU A 252     73.649  31.903  -9.449  1.00 30.61 A
     ATOM   1419   CG   GLU A 252     74.162  30.682  -8.689  1.00 33.88 A
 55  ATOM   1420   CD   GLU A 252     75.493  30.171  -9.219  1.00 32.82 A
     ATOM   1421   OE1  GLU A 252     76.277  30.987  -9.747  1.00 35.25 A
     ATOM   1422   OE2  GLU A 252     75.756  28.956  -9.095  1.00 32.14 A
     ATOM   1423   C    GLU A 252     73.260  33.390  -7.494  1.00 32.09 A
     ATOM   1424   O    GLU A 252     72.157  33.928  -7.469  1.00 32.01 A
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	ATOM	1425	N	LEU A 253	73.852	32.900	-6.408	1.00	33.87	A
	ATOM	1426	CA	LEU A 253	73.230	32.988	-5.096	1.00	35.16	A
	ATOM	1427	CB	LEU A 253	74.031	32.183	-4.078	1.00	37.63	A
	ATOM	1428	CG	LEU A 253	73.371	30.937	-3.479	1.00	40.98	A
5	ATOM	1429	CD1	LEU A 253	74.302	30.321	-2.433	1.00	42.16	A
	ATOM	1430	CD2	LEU A 253	72.043	31.314	-2.835	1.00	40.33	A
	ATOM	1431	C	LEU A 253	73.148	34.445	-4.640	1.00	37.20	A
	ATOM	1432	O	LEU A 253	72.300	34.810	-3.820	1.00	37.33	A
	ATOM	1433	N	LEU A 254	74.036	35.276	-5.171	1.00	36.48	A
10	ATOM	1434	CA	LEU A 254	74.052	36.686	-4.816	1.00	37.76	A
	ATOM	1435	CB	LEU A 254	75.481	37.235	-4.890	1.00	35.47	A
	ATOM	1436	CG	LEU A 254	76.512	36.692	-3.899	1.00	32.31	A
	ATOM	1437	CD1	LEU A 254	77.839	37.416	-4.108	1.00	32.18	A
	ATOM	1438	CD2	LEU A 254	76.019	36.891	-2.474	1.00	29.68	A
15	ATOM	1439	C	LEU A 254	73.150	37.496	-5.737	1.00	39.82	A
	ATOM	1440	O	LEU A 254	72.772	38.615	-5.409	1.00	39.15	A
	ATOM	1441	N	THR A 255	72.805	36.919	-6.885	1.00	44.09	A
	ATOM	1442	CA	THR A 255	71.959	37.594	-7.865	1.00	47.95	A
	ATOM	1443	CB	THR A 255	72.591	37.544	-9.276	1.00	48.10	A
20	ATOM	1444	OG1	THR A 255	73.924	38.072	-9.227	1.00	48.96	A
	ATOM	1445	CG2	THR A 255	71.768	38.376	-10.253	1.00	50.10	A
	ATOM	1446	C	THR A 255	70.538	37.032	-7.954	1.00	49.95	A
	ATOM	1447	O	THR A 255	69.631	37.537	-7.300	1.00	51.66	A
	ATOM	1448	N	GLU A 256	70.344	35.994	-8.764	1.00	52.84	A
25	ATOM	1449	CA	GLU A 256	69.018	35.395	-8.939	1.00	55.77	A
	ATOM	1450	CB	GLU A 256	69.036	34.342	-10.061	1.00	55.24	A
	ATOM	1451	CG	GLU A 256	70.360	34.171	-10.790	0.00	55.40	A
	ATOM	1452	CD	GLU A 256	70.699	35.348	-11.681	0.00	55.34	A
	ATOM	1453	OE1	GLU A 256	69.831	35.760	-12.480	0.00	55.36	A
30	ATOM	1454	OE2	GLU A 256	71.837	35.852	-11.593	0.00	55.36	A
	ATOM	1455	C	GLU A 256	68.451	34.743	-7.677	1.00	57.04	A
	ATOM	1456	O	GLU A 256	67.396	34.107	-7.732	1.00	56.82	A
	ATOM	1457	N	LYS A 257	69.137	34.911	-6.549	1.00	58.87	A
35	ATOM	1458	CA	LYS A 257	68.711	34.308	-5.286	1.00	60.38	A
	ATOM	1459	CB	LYS A 257	67.607	35.151	-4.623	1.00	60.84	A
	ATOM	1460	CG	LYS A 257	66.327	35.322	-5.430	0.00	60.71	A
	ATOM	1461	CD	LYS A 257	65.352	36.261	-4.731	0.00	60.78	A
	ATOM	1462	CE	LYS A 257	64.943	35.734	-3.363	0.00	60.77	A
	ATOM	1463	NZ	LYS A 257	63.992	36.650	-2.674	0.00	60.78	A
40	ATOM	1464	C	LYS A 257	68.227	32.878	-5.546	1.00	61.40	A
	ATOM	1465	O	LYS A 257	67.046	32.565	-5.389	1.00	61.84	A
	ATOM	1466	N	SER A 258	69.160	32.020	-5.958	1.00	61.26	A
	ATOM	1467	CA	SER A 258	68.865	30.622	-6.271	1.00	61.31	A
45	ATOM	1468	CB	SER A 258	68.105	30.548	-7.605	1.00	62.95	A
	ATOM	1469	OG	SER A 258	68.707	31.374	-8.596	1.00	63.22	A
	ATOM	1470	C	SER A 258	70.149	29.771	-6.334	1.00	60.39	A
	ATOM	1471	O	SER A 258	71.257	30.312	-6.329	1.00	60.58	A
	ATOM	1472	N	ALA A 259	70.001	28.447	-6.393	1.00	57.62	A
50	ATOM	1473	CA	ALA A 259	71.159	27.551	-6.444	1.00	54.75	A
	ATOM	1474	CB	ALA A 259	71.670	27.289	-5.025	1.00	54.90	A
	ATOM	1475	C	ALA A 259	70.890	26.218	-7.147	1.00	52.13	A
	ATOM	1476	O	ALA A 259	69.759	25.726	-7.175	1.00	51.63	A
	ATOM	1477	N	CYS A 260	71.945	25.641	-7.712	1.00	48.49	A
	ATOM	1478	CA	CYS A 260	71.848	24.371	-8.417	1.00	44.82	A
55	ATOM	1479	CB	CYS A 260	71.499	24.596	-9.890	1.00	46.78	A
	ATOM	1480	SG	CYS A 260	72.731	25.549	-10.821	1.00	53.48	A
	ATOM	1481	C	CYS A 260	73.176	23.643	-8.310	1.00	41.48	A
	ATOM	1482	O	CYS A 260	74.085	24.090	-7.612	1.00	41.05	A
	ATOM	1483	N	LYS A 261	73.288	22.525	-9.012	1.00	37.76	A

	ATOM	1484	CA	LYS A 261	74.503	21.729	-8.980	1.00	34.90 A
	ATOM	1485	CB	LYS A 261	74.394	20.587	-9.990	1.00	35.93 A
	ATOM	1486	CG	LYS A 261	73.239	19.644	-9.691	1.00	38.46 A
	ATOM	1487	CD	LYS A 261	73.239	18.430	-10.601	1.00	39.70 A
5	ATOM	1488	CE	LYS A 261	72.117	17.474	-10.229	1.00	40.95 A
	ATOM	1489	NZ	LYS A 261	72.076	16.269	-11.110	1.00	41.64 A
	ATOM	1490	C	LYS A 261	75.751	22.556	-9.247	1.00	32.19 A
	ATOM	1491	O	LYS A 261	76.780	22.366	-8.595	1.00	30.08 A
	ATOM	1492	N	SER A 262	75.651	23.480	-10.200	1.00	30.41 A
10	ATOM	1493	CA	SER A 262	76.771	24.337	-10.556	1.00	27.88 A
	ATOM	1494	CB	SER A 262	76.361	25.333	-11.643	1.00	29.04 A
	ATOM	1495	OG	SER A 262	76.398	24.732	-12.921	1.00	32.20 A
	ATOM	1496	C	SER A 262	77.325	25.095	-9.360	1.00	27.01 A
	ATOM	1497	O	SER A 262	78.515	25.403	-9.320	1.00	27.37 A
15	ATOM	1498	N	SER A 263	76.469	25.406	-8.392	1.00	24.83 A
	ATOM	1499	CA	SER A 263	76.924	26.115	-7.201	1.00	26.29 A
	ATOM	1500	CB	SER A 263	75.758	26.354	-6.242	1.00	26.59 A
	ATOM	1501	OG	SER A 263	74.830	27.254	-6.832	1.00	30.68 A
	ATOM	1502	C	SER A 263	78.039	25.337	-6.506	1.00	25.15 A
20	ATOM	1503	O	SER A 263	79.034	25.924	-6.078	1.00	25.38 A
	ATOM	1504	N	ASP A 264	77.884	24.019	-6.396	1.00	23.51 A
	ATOM	1505	CA	ASP A 264	78.930	23.215	-5.773	1.00	22.06 A
	ATOM	1506	CB	ASP A 264	78.500	21.754	-5.613	1.00	23.87 A
	ATOM	1507	CG	ASP A 264	77.378	21.577	-4.599	1.00	27.11 A
25	ATOM	1508	OD1	ASP A 264	77.276	22.402	-3.662	1.00	25.60 A
	ATOM	1509	OD2	ASP A 264	76.612	20.599	-4.730	1.00	26.16 A
	ATOM	1510	C	ASP A 264	80.175	23.267	-6.642	1.00	20.62 A
	ATOM	1511	O	ASP A 264	81.289	23.339	-6.129	1.00	20.01 A
	ATOM	1512	N	LEU A 265	79.985	23.246	-7.959	1.00	18.87 A
30	ATOM	1513	CA	LEU A 265	81.113	23.275	-8.876	1.00	20.02 A
	ATOM	1514	CB	LEU A 265	80.634	23.131	-10.322	1.00	19.94 A
	ATOM	1515	CG	LEU A 265	80.037	21.763	-10.672	1.00	21.08 A
	ATOM	1516	CD1	LEU A 265	79.580	21.771	-12.122	1.00	22.16 A
	ATOM	1517	CD2	LEU A 265	81.077	20.659	-10.449	1.00	16.76 A
35	ATOM	1518	C	LEU A 265	81.910	24.552	-8.705	1.00	20.53 A
	ATOM	1519	O	LEU A 265	83.130	24.563	-8.881	1.00	21.94 A
	ATOM	1520	N	TRP A 266	81.221	25.633	-8.361	1.00	21.74 A
	ATOM	1521	CA	TRP A 266	81.897	26.899	-8.138	1.00	20.89 A
	ATOM	1522	CB	TRP A 266	80.879	28.031	-7.960	1.00	22.97 A
40	ATOM	1523	CG	TRP A 266	81.477	29.309	-7.411	1.00	24.01 A
	ATOM	1524	CD2	TRP A 266	81.814	30.487	-8.152	1.00	23.31 A
	ATOM	1525	CE2	TRP A 266	82.391	31.404	-7.243	1.00	23.27 A
	ATOM	1526	CE3	TRP A 266	81.689	30.858	-9.497	1.00	24.55 A
	ATOM	1527	CD1	TRP A 266	81.850	29.555	-6.116	1.00	24.55 A
45	ATOM	1528	NE1	TRP A 266	82.401	30.811	-6.009	1.00	23.65 A
	ATOM	1529	CZ2	TRP A 266	82.839	32.663	-7.636	1.00	22.89 A
	ATOM	1530	CZ3	TRP A 266	82.139	32.116	-9.887	1.00	23.30 A
	ATOM	1531	CH2	TRP A 266	82.705	33.000	-8.959	1.00	23.32 A
	ATOM	1532	C	TRP A 266	82.739	26.735	-6.877	1.00	20.30 A
50	ATOM	1533	O	TRP A 266	83.913	27.102	-6.853	1.00	20.60 A
	ATOM	1534	N	ALA A 267	82.141	26.175	-5.832	1.00	18.06 A
	ATOM	1535	CA	ALA A 267	82.868	25.966	-4.584	1.00	18.46 A
	ATOM	1536	CB	ALA A 267	81.984	25.254	-3.561	1.00	17.96 A
	ATOM	1537	C	ALA A 267	84.112	25.132	-4.877	1.00	18.05 A
55	ATOM	1538	O	ALA A 267	85.173	25.340	-4.287	1.00	17.35 A
	ATOM	1539	N	LEU A 268	83.982	24.190	-5.799	1.00	17.12 A
	ATOM	1540	CA	LEU A 268	85.118	23.355	-6.157	1.00	18.45 A
	ATOM	1541	CB	LEU A 268	84.703	22.326	-7.204	1.00	17.67 A
	ATOM	1542	CG	LEU A 268	85.809	21.436	-7.772	1.00	16.93 A

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      ATOM   1543   CD1 LEU A 268      86.333  20.495  -6.704  1.00 17.10 A
      ATOM   1544   CD2 LEU A 268      85.258  20.651  -8.953  1.00 13.46 A
      ATOM   1545   C   LEU A 268      86.232  24.249  -6.705  1.00 19.64 A
      ATOM   1546   O   LEU A 268      87.389  24.129  -6.304  1.00 18.99 A
   5  ATOM   1547   N   GLY A 269      85.869  25.158  -7.606  1.00 19.16 A
      ATOM   1548   CA  GLY A 269      86.854  26.057  -8.178  1.00 18.25 A
      ATOM   1549   C   GLY A 269      87.604  26.804  -7.103  1.00 20.30 A
      ATOM   1550   O   GLY A 269      88.825  26.960  -7.178  1.00 20.24 A
      ATOM   1551   N   CYS A 270      86.874  27.266  -6.090  1.00 20.20 A
  10  ATOM   1552   CA  CYS A 270      87.486  27.996  -4.986  1.00 20.73 A
      ATOM   1553   CB  CYS A 270      86.418  28.523  -4.031  1.00 21.05 A
      ATOM   1554   SG  CYS A 270      85.292  29.703  -4.752  1.00 23.98 A
      ATOM   1555   C   CYS A 270      88.417  27.082  -4.206  1.00 20.77 A
      ATOM   1556   O   CYS A 270      89.550  27.449  -3.878  1.00 22.00 A
  15  ATOM   1557   N   ILE A 271      87.927  25.886  -3.907  1.00 19.32 A
      ATOM   1558   CA  ILE A 271      88.704  24.921  -3.147  1.00 18.46 A
      ATOM   1559   CB  ILE A 271      87.872  23.668  -2.861  1.00 15.71 A
      ATOM   1560   CG2 ILE A 271      88.722  22.607  -2.182  1.00 16.51 A
      ATOM   1561   CG1 ILE A 271      86.688  24.051  -1.974  1.00 14.97 A
  20  ATOM   1562   CD1 ILE A 271      85.785  22.891  -1.639  1.00 17.80 A
      ATOM   1563   C   ILE A 271      90.001  24.546  -3.856  1.00 19.30 A
      ATOM   1564   O   ILE A 271      91.062  24.532  -3.242  1.00 21.30 A
      ATOM   1565   N   ILE A 272      89.915  24.253  -5.147  1.00 20.07 A
      ATOM   1566   CA  ILE A 272      91.094  23.894  -5.906  1.00 20.52 A
  25  ATOM   1567   CB  ILE A 272      90.758  23.693  -7.385  1.00 22.57 A
      ATOM   1568   CG2 ILE A 272      92.041  23.498  -8.184  1.00 21.91 A
      ATOM   1569   CG1 ILE A 272      89.818  22.495  -7.542  1.00 23.57 A
      ATOM   1570   CD1 ILE A 272      89.314  22.294  -8.949  1.00 24.20 A
      ATOM   1571   C   ILE A 272      92.112  25.010  -5.794  1.00 22.90 A
  30  ATOM   1572   O   ILE A 272      93.287  24.783  -5.507  1.00 21.82 A
      ATOM   1573   N   TYR A 273      91.638  26.226  -6.028  1.00 24.81 A
      ATOM   1574   CA  TYR A 273      92.478  27.400  -5.969  1.00 25.15 A
      ATOM   1575   CB  TYR A 273      91.630  28.632  -6.255  1.00 26.04 A
      ATOM   1576   CG  TYR A 273      92.385  29.931  -6.173  1.00 27.80 A
  35  ATOM   1577   CD1 TYR A 273      92.715  30.500  -4.939  1.00 27.53 A
      ATOM   1578   CE1 TYR A 273      93.405  31.708  -4.870  1.00 27.30 A
      ATOM   1579   CD2 TYR A 273      92.765  30.602  -7.333  1.00 27.17 A
      ATOM   1580   CE2 TYR A 273      93.448  31.804  -7.277  1.00 26.68 A
      ATOM   1581   CZ  TYR A 273      93.766  32.355  -6.050  1.00 28.05 A
  40  ATOM   1582   OH  TYR A 273      94.433  33.562  -6.018  1.00 30.80 A
      ATOM   1583   C   TYR A 273      93.139  27.521  -4.599  1.00 26.05 A
      ATOM   1584   O   TYR A 273      94.310  27.889  -4.489  1.00 24.45 A
      ATOM   1585   N   GLN A 274      92.380  27.205  -3.556  1.00 25.95 A
  45  ATOM   1586   CA  GLN A 274      92.896  27.299  -2.202  1.00 25.98 A
      ATOM   1587   CB  GLN A 274      91.743  27.209  -1.199  1.00 25.56 A
      ATOM   1588   CG  GLN A 274      92.169  27.422   0.233  1.00 25.42 A
      ATOM   1589   CD  GLN A 274      90.990  27.571   1.161  1.00 28.69 A
      ATOM   1590   OE1 GLN A 274      89.838  27.506   0.732  1.00 29.84 A
      ATOM   1591   NE2 GLN A 274      91.267  27.774   2.445  1.00 29.83 A
  50  ATOM   1592   C   GLN A 274      93.951  26.231  -1.915  1.00 25.08 A
      ATOM   1593   O   GLN A 274      94.862  26.452  -1.120  1.00 24.38 A
      ATOM   1594   N   LEU A 275      93.838  25.081  -2.567  1.00 24.42 A
      ATOM   1595   CA  LEU A 275      94.813  24.006  -2.369  1.00 24.38 A
      ATOM   1596   CB  LEU A 275      94.335  22.713  -3.035  1.00 22.95 A
  55  ATOM   1597   CG  LEU A 275      93.193  21.959  -2.354  1.00 25.67 A
      ATOM   1598   CD1 LEU A 275      92.817  20.702  -3.154  1.00 22.16 A
      ATOM   1599   CD2 LEU A 275      93.633  21.580  -0.950  1.00 23.32 A
      ATOM   1600   C   LEU A 275      96.171  24.376  -2.948  1.00 25.40 A
      ATOM   1601   O   LEU A 275      97.212  24.071  -2.376  1.00 25.87 A
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     ATOM   1602  N   VAL A 276      96.153  25.039  -4.094  1.00 25.78 A
     ATOM   1603  CA  VAL A 276      97.384  25.419  -4.759  1.00 26.12 A
     ATOM   1604  CB  VAL A 276      97.170  25.522  -6.280  1.00 26.14 A
     ATOM   1605  CG1 VAL A 276      98.492  25.783  -6.962  1.00 24.46 A
  5  ATOM   1606  CG2 VAL A 276      96.531  24.248  -6.804  1.00 22.55 A
     ATOM   1607  C   VAL A 276      97.990  26.735  -4.275  1.00 27.83 A
     ATOM   1608  O   VAL A 276      99.210  26.849  -4.164  1.00 29.55 A
     ATOM   1609  N   ALA A 277      97.148  27.723  -3.990  1.00 26.88 A
     ATOM   1610  CA  ALA A 277      97.639  29.023  -3.549  1.00 26.50 A
 10  ATOM   1611  CB  ALA A 277      96.765  30.126  -4.122  1.00 24.49 A
     ATOM   1612  C   ALA A 277      97.740  29.175  -2.035  1.00 26.79 A
     ATOM   1613  O   ALA A 277      98.465  30.042  -1.548  1.00 28.26 A
     ATOM   1614  N   GLY A 278      97.020  28.343  -1.290  1.00 26.17 A
     ATOM   1615  CA  GLY A 278      97.074  28.430   0.159  1.00 24.63 A
 15  ATOM   1616  C   GLY A 278      95.971  29.272   0.780  1.00 25.52 A
     ATOM   1617  O   GLY A 278      95.793  29.259   1.998  1.00 25.22 A
     ATOM   1618  N   LEU A 279      95.229  29.998  -0.051  1.00 24.94 A
     ATOM   1619  CA  LEU A 279      94.130  30.849   0.408  1.00 25.58 A
     ATOM   1620  CB  LEU A 279      94.603  32.302   0.522  1.00 27.65 A
 20  ATOM   1621  CG  LEU A 279      95.748  32.631   1.470  1.00 29.35 A
     ATOM   1622  CD1 LEU A 279      96.365  33.958   1.075  1.00 30.47 A
     ATOM   1623  CD2 LEU A 279      95.232  32.671   2.892  1.00 29.70 A
     ATOM   1624  C   LEU A 279      92.987  30.822  -0.605  1.00 25.19 A
     ATOM   1625  O   LEU A 279      93.201  30.525  -1.781  1.00 25.34 A
 25  ATOM   1626  N   PRO A 280      91.755  31.126  -0.165  1.00 23.60 A
     ATOM   1627  CD  PRO A 280      91.306  31.357   1.216  1.00 22.97 A
     ATOM   1628  CA  PRO A 280      90.628  31.133  -1.103  1.00 23.81 A
     ATOM   1629  CB  PRO A 280      89.417  31.338  -0.195  1.00 25.19 A
     ATOM   1630  CG  PRO A 280      89.982  32.041   1.008  1.00 25.48 A
 30  ATOM   1631  C   PRO A 280      90.855  32.295  -2.083  1.00 26.26 A
     ATOM   1632  O   PRO A 280      91.632  33.207  -1.792  1.00 25.42 A
     ATOM   1633  N   PRO A 281      90.178  32.284  -3.243  1.00 26.49 A
     ATOM   1634  CD  PRO A 281      89.182  31.285  -3.651  1.00 27.13 A
     ATOM   1635  CA  PRO A 281      90.307  33.316  -4.281  1.00 27.25 A
 35  ATOM   1636  CB  PRO A 281      89.522  32.727  -5.463  1.00 26.75 A
     ATOM   1637  CG  PRO A 281      89.354  31.291  -5.136  1.00 25.29 A
     ATOM   1638  C   PRO A 281      89.817  34.724  -3.954  1.00 27.30 A
     ATOM   1639  O   PRO A 281      90.497  35.709  -4.238  1.00 27.67 A
     ATOM   1640  N   PHE A 282      88.623  34.817  -3.388  1.00 27.79 A
 40  ATOM   1641  CA  PHE A 282      88.034  36.107  -3.066  1.00 28.37 A
     ATOM   1642  CB  PHE A 282      86.563  36.086  -3.467  1.00 27.77 A
     ATOM   1643  CG  PHE A 282      86.335  35.557  -4.857  1.00 29.06 A
     ATOM   1644  CD1 PHE A 282      86.454  36.392  -5.965  1.00 28.74 A
     ATOM   1645  CD2 PHE A 282      86.077  34.207  -5.063  1.00 25.80 A
 45  ATOM   1646  CE1 PHE A 282      86.324  35.887  -7.255  1.00 28.22 A
     ATOM   1647  CE2 PHE A 282      85.947  33.695  -6.346  1.00 26.04 A
     ATOM   1648  CZ  PHE A 282      86.071  34.535  -7.444  1.00 28.02 A
     ATOM   1649  C   PHE A 282      88.184  36.426  -1.589  1.00 29.95 A
     ATOM   1650  O   PHE A 282      87.600  35.763  -0.741  1.00 32.95 A
 50  ATOM   1651  N   ARG A 283      88.977  37.445  -1.285  1.00 32.36 A
     ATOM   1652  CA  ARG A 283      89.215  37.843   0.100  1.00 33.06 A
     ATOM   1653  CB  ARG A 283      90.622  37.432   0.520  1.00 33.69 A
     ATOM   1654  CG  ARG A 283      90.990  36.006   0.151  1.00 36.29 A
     ATOM   1655  CD  ARG A 283      92.341  35.635   0.727  1.00 38.81 A
 55  ATOM   1656  NE  ARG A 283      93.415  36.423   0.133  1.00 41.73 A
     ATOM   1657  CZ  ARG A 283      93.783  36.338  -1.142  1.00 44.14 A
     ATOM   1658  NH1 ARG A 283      93.162  35.497  -1.958  1.00 45.19 A
     ATOM   1659  NH2 ARG A 283      94.772  37.094  -1.604  1.00 44.57 A
     ATOM   1660  C   ARG A 283      89.065  39.353   0.267  1.00 32.44 A
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      ATOM   1661  O    ARG A 283      89.429  40.118  -0.624  1.00 31.91 A
      ATOM   1662  N    ALA A 284      88.527  39.777   1.406  1.00 33.21 A
      ATOM   1663  CA   ALA A 284      88.348  41.199   1.682  1.00 32.82 A
      ATOM   1664  CB   ALA A 284      87.265  41.777   0.782  1.00 32.40 A
 5    ATOM   1665  C    ALA A 284      88.004  41.445   3.147  1.00 32.98 A
      ATOM   1666  O    ALA A 284      87.779  40.502   3.913  1.00 32.53 A
      ATOM   1667  N    GLY A 285      87.961  42.723   3.520  1.00 32.60 A
      ATOM   1668  CA   GLY A 285      87.666  43.112   4.887  1.00 30.00 A
      ATOM   1669  C    GLY A 285      86.355  42.637   5.486  1.00 29.37 A
10    ATOM   1670  O    GLY A 285      86.287  42.366   6.685  1.00 29.35 A
      ATOM   1671  N    ASN A 286      85.302  42.547   4.685  1.00 28.99 A
      ATOM   1672  CA   ASN A 286      84.024  42.097   5.226  1.00 29.58 A
      ATOM   1673  CB   ASN A 286      83.238  43.281   5.801  1.00 29.54 A
      ATOM   1674  CG   ASN A 286      82.958  44.356   4.764  1.00 29.60 A
15    ATOM   1675  OD1  ASN A 286      82.350  44.092   3.720  1.00 26.48 A
      ATOM   1676  ND2  ASN A 286      83.400  45.575   5.049  1.00 25.96 A
      ATOM   1677  C    ASN A 286      83.196  41.378   4.182  1.00 30.16 A
      ATOM   1678  O    ASN A 286      83.551  41.357   3.004  1.00 31.70 A
      ATOM   1679  N    GLU A 287      82.084  40.796   4.613  1.00 31.14 A
20    ATOM   1680  CA   GLU A 287      81.225  40.051   3.699  1.00 32.53 A
      ATOM   1681  CB   GLU A 287      79.943  39.600   4.397  1.00 35.66 A
      ATOM   1682  CG   GLU A 287      80.168  38.813   5.666  1.00 43.05 A
      ATOM   1683  CD   GLU A 287      79.138  37.707   5.856  1.00 47.79 A
      ATOM   1684  OE1  GLU A 287      77.933  37.959   5.616  1.00 49.01 A
25    ATOM   1685  OE2  GLU A 287      79.539  36.588   6.256  1.00 48.82 A
      ATOM   1686  C    GLU A 287      80.853  40.837   2.457  1.00 30.19 A
      ATOM   1687  O    GLU A 287      80.986  40.332   1.343  1.00 30.33 A
      ATOM   1688  N    TYR A 288      80.385  42.066   2.653  1.00 29.13 A
      ATOM   1689  CA   TYR A 288      79.972  42.922   1.541  1.00 27.98 A
30    ATOM   1690  CB   TYR A 288      79.573  44.320   2.034  1.00 26.59 A
      ATOM   1691  CG   TYR A 288      79.080  45.217   0.917  1.00 26.43 A
      ATOM   1692  CD1  TYR A 288      77.799  45.060   0.385  1.00 28.06 A
      ATOM   1693  CE1  TYR A 288      77.350  45.854  -0.675  1.00 28.72 A
      ATOM   1694  CD2  TYR A 288      79.905  46.196   0.363  1.00 27.24 A
35    ATOM   1695  CE2  TYR A 288      79.470  46.994  -0.697  1.00 28.55 A
      ATOM   1696  CZ   TYR A 288      78.192  46.814  -1.211  1.00 29.91 A
      ATOM   1697  OH   TYR A 288      77.765  47.571  -2.275  1.00 30.53 A
      ATOM   1698  C    TYR A 288      81.057  43.068   0.487  1.00 25.84 A
      ATOM   1699  O    TYR A 288      80.790  42.940  -0.701  1.00 27.88 A
40    ATOM   1700  N    LEU A 289      82.279  43.344   0.919  1.00 24.24 A
      ATOM   1701  CA   LEU A 289      83.382  43.495  -0.018  1.00 26.60 A
      ATOM   1702  CB   LEU A 289      84.662  43.919   0.713  1.00 25.15 A
      ATOM   1703  CG   LEU A 289      85.005  45.411   0.817  1.00 27.82 A
      ATOM   1704  CD1  LEU A 289      83.830  46.277   0.354  1.00 27.32 A
45    ATOM   1705  CD2  LEU A 289      85.404  45.727   2.251  1.00 25.62 A
      ATOM   1706  C    LEU A 289      83.622  42.184  -0.736  1.00 27.45 A
      ATOM   1707  O    LEU A 289      83.901  42.157  -1.933  1.00 30.18 A
      ATOM   1708  N    ILE A 290      83.520  41.093   0.009  1.00 28.11 A
      ATOM   1709  CA   ILE A 290      83.726  39.770  -0.551  1.00 28.84 A
50    ATOM   1710  CB   ILE A 290      83.565  38.710   0.545  1.00 29.67 A
      ATOM   1711  CG2  ILE A 290      83.450  37.331  -0.071  1.00 31.47 A
      ATOM   1712  CG1  ILE A 290      84.756  38.802   1.504  1.00 29.26 A
      ATOM   1713  CD1  ILE A 290      84.604  37.995   2.779  1.00 27.48 A
      ATOM   1714  C    ILE A 290      82.727  39.530  -1.676  1.00 27.99 A
55    ATOM   1715  O    ILE A 290      83.090  39.110  -2.775  1.00 26.63 A
      ATOM   1716  N    PHE A 291      81.464  39.824  -1.406  1.00 28.54 A
      ATOM   1717  CA   PHE A 291      80.432  39.638  -2.407  1.00 27.14 A
      ATOM   1718  CB   PHE A 291      79.066  39.945  -1.807  1.00 28.37 A
      ATOM   1719  CG   PHE A 291      78.674  39.024  -0.688  1.00 30.37 A
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      ATOM   1720   CD1  PHE A 291      79.283  37.778  -0.543  1.00 30.07 A
      ATOM   1721   CD2  PHE A 291      77.658  39.377   0.194  1.00 29.74 A
      ATOM   1722   CE1  PHE A 291      78.885  36.897   0.463  1.00 32.11 A
      ATOM   1723   CE2  PHE A 291      77.253  38.502   1.202  1.00 32.76 A
  5   ATOM   1724   CZ   PHE A 291      77.867  37.259   1.336  1.00 32.01 A
      ATOM   1725   C    PHE A 291      80.690  40.525  -3.618  1.00 27.79 A
      ATOM   1726   O    PHE A 291      80.434  40.124  -4.755  1.00 26.52 A
      ATOM   1727   N    GLN A 292      81.200  41.730  -3.384  1.00 27.05 A
      ATOM   1728   CA   GLN A 292      81.478  42.613  -4.503  1.00 27.48 A
 10   ATOM   1729   CB   GLN A 292      82.072  43.945  -4.037  1.00 27.80 A
      ATOM   1730   CG   GLN A 292      81.041  44.984  -3.651  1.00 30.50 A
      ATOM   1731   CD   GLN A 292      81.630  46.381  -3.565  1.00 31.30 A
      ATOM   1732   OE1  GLN A 292      82.519  46.644  -2.762  1.00 33.17 A
      ATOM   1733   NE2  GLN A 292      81.133  47.284  -4.399  1.00 32.86 A
 15   ATOM   1734   C    GLN A 292      82.442  41.934  -5.460  1.00 26.82 A
      ATOM   1735   O    GLN A 292      82.186  41.883  -6.664  1.00 28.03 A
      ATOM   1736   N    LYS A 293      83.539  41.402  -4.924  1.00 24.08 A
      ATOM   1737   CA   LYS A 293      84.542  40.739  -5.751  1.00 24.43 A
      ATOM   1738   CB   LYS A 293      85.752  40.368  -4.901  1.00 26.19 A
 20   ATOM   1739   CG   LYS A 293      86.456  41.580  -4.319  1.00 28.24 A
      ATOM   1740   CD   LYS A 293      87.750  41.213  -3.608  1.00 30.60 A
      ATOM   1741   CE   LYS A 293      88.555  42.468  -3.273  1.00 32.23 A
      ATOM   1742   NZ   LYS A 293      89.849  42.170  -2.591  1.00 32.86 A
      ATOM   1743   C    LYS A 293      84.008  39.500  -6.472  1.00 25.06 A
 25   ATOM   1744   O    LYS A 293      84.350  39.236  -7.628  1.00 24.96 A
      ATOM   1745   N    ILE A 294      83.163  38.740  -5.793  1.00 24.33 A
      ATOM   1746   CA   ILE A 294      82.593  37.552  -6.399  1.00 24.46 A
      ATOM   1747   CB   ILE A 294      81.725  36.800  -5.385  1.00 22.52 A
      ATOM   1748   CG2  ILE A 294      80.837  35.783  -6.093  1.00 23.14 A
 30   ATOM   1749   CG1  ILE A 294      82.632  36.141  -4.345  1.00 21.54 A
      ATOM   1750   CD1  ILE A 294      81.892  35.535  -3.175  1.00 19.38 A
      ATOM   1751   C    ILE A 294      81.761  37.885  -7.639  1.00 27.01 A
      ATOM   1752   O    ILE A 294      81.967  37.303  -8.704  1.00 23.93 A
      ATOM   1753   N    ILE A 295      80.830  38.828  -7.513  1.00 29.79 A
 35   ATOM   1754   CA   ILE A 295      79.983  39.168  -8.653  1.00 32.98 A
      ATOM   1755   CB   ILE A 295      78.767  40.004  -8.228  1.00 33.96 A
      ATOM   1756   CG2  ILE A 295      77.980  39.246  -7.174  1.00 36.23 A
      ATOM   1757   CG1  ILE A 295      79.216  41.358  -7.682  1.00 35.79 A
      ATOM   1758   CD1  ILE A 295      78.062  42.266  -7.300  1.00 37.79 A
 40   ATOM   1759   C    ILE A 295      80.729  39.898  -9.757  1.00 33.17 A
      ATOM   1760   O    ILE A 295      80.212  40.066 -10.862  1.00 34.06 A
      ATOM   1761   N    LYS A 296      81.946  40.333  -9.462  1.00 33.65 A
      ATOM   1762   CA   LYS A 296      82.747  41.012 -10.468  1.00 34.31 A
      ATOM   1763   CB   LYS A 296      83.353  42.293  -9.895  1.00 38.05 A
 45   ATOM   1764   CG   LYS A 296      82.353  43.427  -9.714  1.00 40.12 A
      ATOM   1765   CD   LYS A 296      83.070  44.736  -9.401  1.00 44.01 A
      ATOM   1766   CE   LYS A 296      82.191  45.939  -9.731  1.00 46.66 A
      ATOM   1767   NZ   LYS A 296      82.972  47.209  -9.833  1.00 47.40 A
      ATOM   1768   C    LYS A 296      83.851  40.078 -10.945  1.00 34.15 A
 50   ATOM   1769   O    LYS A 296      84.622  40.415 -11.847  1.00 33.48 A
      ATOM   1770   N    LEU A 297      83.907  38.897 -10.333  1.00 33.82 A
      ATOM   1771   CA   LEU A 297      84.904  37.890 -10.663  1.00 32.06 A
      ATOM   1772   CB   LEU A 297      84.716  37.418 -12.110  1.00 32.43 A
      ATOM   1773   CG   LEU A 297      85.452  36.144 -12.538  1.00 33.09 A
 55   ATOM   1774   CD1  LEU A 297      84.959  34.966 -11.697  1.00 31.88 A
      ATOM   1775   CD2  LEU A 297      85.206  35.875 -14.025  1.00 32.51 A
      ATOM   1776   C    LEU A 297      86.275  38.515 -10.476  1.00 32.23 A
      ATOM   1777   O    LEU A 297      87.180  38.321 -11.278  1.00 32.08 A
      ATOM   1778   N    GLU A 298      86.424  39.267  -9.395  1.00 33.56 A
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      ATOM   1779  CA   GLU A 298      87.682  39.936  -9.110  1.00 35.66 A
      ATOM   1780  CB   GLU A 298      87.405  41.274  -8.428  1.00 38.03 A
      ATOM   1781  CG   GLU A 298      88.641  42.125  -8.236  1.00 42.97 A
      ATOM   1782  CD   GLU A 298      88.383  43.313  -7.338  1.00 46.19 A
  5   ATOM   1783  OE1  GLU A 298      87.412  44.055  -7.602  1.00 48.41 A
      ATOM   1784  OE2  GLU A 298      89.153  43.504  -6.369  1.00 48.44 A
      ATOM   1785  C    GLU A 298      88.644  39.117  -8.245  1.00 34.35 A
      ATOM   1786  O    GLU A 298      88.508  39.065  -7.021  1.00 35.64 A
      ATOM   1787  N    TYR A 299      89.611  38.478  -8.894  1.00 32.46 A
 10   ATOM   1788  CA   TYR A 299      90.624  37.678  -8.208  1.00 30.71 A
      ATOM   1789  CB   TYR A 299      90.031  36.367  -7.672  1.00 26.01 A
      ATOM   1790  CG   TYR A 299      89.874  35.300  -8.730  1.00 26.77 A
      ATOM   1791  CD1  TYR A 299      88.871  35.390  -9.699  1.00 26.60 A
      ATOM   1792  CE1  TYR A 299      88.768  34.448 -10.724  1.00 26.10 A
 15   ATOM   1793  CD2  TYR A 299      90.770  34.236  -8.807  1.00 22.56 A
      ATOM   1794  CE2  TYR A 299      90.677  33.291  -9.822  1.00 24.59 A
      ATOM   1795  CZ   TYR A 299      89.674  33.400 -10.781  1.00 26.34 A
      ATOM   1796  OH   TYR A 299      89.578  32.463 -11.791  1.00 22.44 A
      ATOM   1797  C    TYR A 299      91.720  37.374  -9.229  1.00 30.95 A
 20   ATOM   1798  O    TYR A 299      91.528  37.575 -10.425  1.00 28.80 A
      ATOM   1799  N    ASP A 300      92.865  36.891  -8.764  1.00 33.38 A
      ATOM   1800  CA   ASP A 300      93.954  36.582  -9.680  1.00 36.47 A
      ATOM   1801  CB   ASP A 300      94.782  37.845  -9.931  1.00 42.34 A
      ATOM   1802  CG   ASP A 300      95.014  38.644  -8.666  1.00 46.20 A
 25   ATOM   1803  OD1  ASP A 300      95.607  38.085  -7.719  1.00 49.27 A
      ATOM   1804  OD2  ASP A 300      94.599  39.826  -8.615  1.00 49.25 A
      ATOM   1805  C    ASP A 300      94.848  35.444  -9.188  1.00 35.61 A
      ATOM   1806  O    ASP A 300      94.857  35.113  -8.002  1.00 34.48 A
      ATOM   1807  N    PHE A 301      95.602  34.854 -10.111  1.00 35.02 A
 30   ATOM   1808  CA   PHE A 301      96.477  33.737  -9.781  1.00 35.94 A
      ATOM   1809  CB   PHE A 301      96.501  32.700 -10.909  1.00 34.28 A
      ATOM   1810  CG   PHE A 301      95.156  32.167 -11.301  1.00 32.40 A
      ATOM   1811  CD1  PHE A 301      94.358  32.856 -12.205  1.00 30.50 A
      ATOM   1812  CD2  PHE A 301      94.708  30.947 -10.803  1.00 31.83 A
 35   ATOM   1813  CE1  PHE A 301      93.131  32.333 -12.617  1.00 31.48 A
      ATOM   1814  CE2  PHE A 301      93.484  30.416 -11.206  1.00 31.37 A
      ATOM   1815  CZ   PHE A 301      92.695  31.109 -12.114  1.00 31.44 A
      ATOM   1816  C    PHE A 301      97.916  34.134  -9.524  1.00 38.11 A
      ATOM   1817  O    PHE A 301      98.458  35.010 -10.196  1.00 39.06 A
 40   ATOM   1818  N    PRO A 302      98.559  33.498  -8.535  1.00 40.47 A
      ATOM   1819  CD   PRO A 302      98.053  32.554  -7.524  1.00 41.16 A
      ATOM   1820  CA   PRO A 302      99.955  33.843  -8.277  1.00 41.88 A
      ATOM   1821  CB   PRO A 302     100.248  33.131  -6.963  1.00 42.01 A
      ATOM   1822  CG   PRO A 302      99.328  31.947  -7.001  1.00 41.79 A
 45   ATOM   1823  C    PRO A 302     100.721  33.265  -9.458  1.00 44.54 A
      ATOM   1824  O    PRO A 302     100.263  32.305 -10.082  1.00 44.30 A
      ATOM   1825  N    GLU A 303     101.874  33.843  -9.770  1.00 47.35 A
      ATOM   1826  CA   GLU A 303     102.667  33.395 -10.912  1.00 50.51 A
      ATOM   1827  CB   GLU A 303     103.859  34.337 -11.105  1.00 53.23 A
 50   ATOM   1828  CG   GLU A 303     104.431  34.376 -12.520  1.00 56.85 A
      ATOM   1829  CD   GLU A 303     103.976  35.600 -13.314  1.00 59.62 A
      ATOM   1830  OE1  GLU A 303     104.508  35.819 -14.424  1.00 60.43 A
      ATOM   1831  OE2  GLU A 303     103.088  36.341 -12.834  1.00 60.65 A
      ATOM   1832  C    GLU A 303     103.173  31.950 -10.829  1.00 50.70 A
 55   ATOM   1833  O    GLU A 303     103.692  31.423 -11.815  1.00 52.21 A
      ATOM   1834  N    ALA A 304     103.018  31.309  -9.672  1.00 49.61 A
      ATOM   1835  CA   ALA A 304     103.495  29.933  -9.488  1.00 49.10 A
      ATOM   1836  CB   ALA A 304     104.077  29.779  -8.082  1.00 48.82 A
      ATOM   1837  C    ALA A 304     102.422  28.869  -9.713  1.00 47.90 A
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      ATOM   1838  O    ALA A 304    102.703  27.666  -9.719  1.00 49.41 A
      ATOM   1839  N    PHE A 305    101.192  29.322  -9.899  1.00 44.69 A
      ATOM   1840  CA   PHE A 305    100.053  28.440 -10.089  1.00 40.05 A
      ATOM   1841  CB   PHE A 305     98.809  29.301 -10.299  1.00 39.69 A
  5   ATOM   1842  CG   PHE A 305     97.568  28.729  -9.697  1.00 37.21 A
      ATOM   1843  CD1  PHE A 305     96.824  27.775 -10.379  1.00 35.36 A
      ATOM   1844  CD2  PHE A 305     97.133  29.157  -8.445  1.00 37.52 A
      ATOM   1845  CE1  PHE A 305     95.658  27.255  -9.825  1.00 34.59 A
      ATOM   1846  CE2  PHE A 305     95.963  28.641  -7.880  1.00 37.01 A
 10   ATOM   1847  CZ   PHE A 305     95.226  27.688  -8.575  1.00 35.13 A
      ATOM   1848  C    PHE A 305    100.197  27.435 -11.230  1.00 37.65 A
      ATOM   1849  O    PHE A 305    100.364  27.814 -12.389  1.00 36.24 A
      ATOM   1850  N    PHE A 306    100.120  26.150 -10.892  1.00 35.64 A
      ATOM   1851  CA   PHE A 306    100.219  25.081 -11.884  1.00 32.40 A
 15   ATOM   1852  CB   PHE A 306     99.781  23.749 -11.268  1.00 29.92 A
      ATOM   1853  CG   PHE A 306    100.412  23.456  -9.926  1.00 28.24 A
      ATOM   1854  CD1  PHE A 306    101.796  23.457  -9.770  1.00 27.43 A
      ATOM   1855  CD2  PHE A 306     99.617  23.173  -8.816  1.00 28.03 A
      ATOM   1856  CE1  PHE A 306    102.380  23.181  -8.526  1.00 29.55 A
 20   ATOM   1857  CE2  PHE A 306    100.188  22.895  -7.566  1.00 29.06 A
      ATOM   1858  CZ   PHE A 306    101.575  22.901  -7.422  1.00 29.51 A
      ATOM   1859  C    PHE A 306     99.296  25.452 -13.047  1.00 32.76 A
      ATOM   1860  O    PHE A 306     98.087  25.625 -12.861  1.00 34.51 A
      ATOM   1861  N    PRO A 307     99.856  25.587 -14.262  1.00 31.43 A
 25   ATOM   1862  CD   PRO A 307    101.272  25.327 -14.569  1.00 30.74 A
      ATOM   1863  CA   PRO A 307     99.128  25.947 -15.485  1.00 29.54 A
      ATOM   1864  CB   PRO A 307    100.158  25.700 -16.579  1.00 29.48 A
      ATOM   1865  CG   PRO A 307    101.437  26.032 -15.895  1.00 30.81 A
      ATOM   1866  C    PRO A 307     97.826  25.193 -15.743  1.00 29.74 A
 30   ATOM   1867  O    PRO A 307     96.795  25.804 -16.022  1.00 31.08 A
      ATOM   1868  N    LYS A 308     97.867  23.870 -15.660  1.00 28.47 A
      ATOM   1869  CA   LYS A 308     96.672  23.086 -15.904  1.00 27.92 A
      ATOM   1870  CB   LYS A 308     97.044  21.619 -16.114  1.00 28.70 A
      ATOM   1871  CG   LYS A 308     97.696  21.405 -17.460  1.00 30.04 A
 35   ATOM   1872  CD   LYS A 308     98.310  20.029 -17.595  1.00 33.76 A
      ATOM   1873  CE   LYS A 308     99.106  19.926 -18.888  1.00 33.22 A
      ATOM   1874  NZ   LYS A 308     99.897  18.663 -18.948  1.00 36.67 A
      ATOM   1875  C    LYS A 308     95.632  23.247 -14.800  1.00 26.85 A
      ATOM   1876  O    LYS A 308     94.433  23.170 -15.060  1.00 25.34 A
 40   ATOM   1877  N    ALA A 309     96.084  23.480 -13.574  1.00 24.70 A
      ATOM   1878  CA   ALA A 309     95.145  23.685 -12.486  1.00 24.41 A
      ATOM   1879  CB   ALA A 309     95.855  23.652 -11.146  1.00 22.65 A
      ATOM   1880  C    ALA A 309     94.523  25.051 -12.712  1.00 26.56 A
      ATOM   1881  O    ALA A 309     93.327  25.238 -12.493  1.00 28.91 A
 45   ATOM   1882  N    ARG A 310     95.335  26.011 -13.149  1.00 26.04 A
      ATOM   1883  CA   ARG A 310     94.830  27.354 -13.402  1.00 27.56 A
      ATOM   1884  CB   ARG A 310     95.961  28.289 -13.864  1.00 28.69 A
      ATOM   1885  CG   ARG A 310     95.438  29.584 -14.480  1.00 31.42 A
      ATOM   1886  CD   ARG A 310     96.482  30.676 -14.634  1.00 33.72 A
 50   ATOM   1887  NE   ARG A 310     95.881  31.868 -15.233  1.00 37.73 A
      ATOM   1888  CZ   ARG A 310     96.412  33.090 -15.198  1.00 38.44 A
      ATOM   1889  NH1  ARG A 310     97.572  33.297 -14.588  1.00 37.72 A
      ATOM   1890  NH2  ARG A 310     95.775  34.108 -15.757  1.00 37.74 A
      ATOM   1891  C    ARG A 310     93.743  27.280 -14.475  1.00 26.84 A
 55   ATOM   1892  O    ARG A 310     92.678  27.880 -14.344  1.00 26.39 A
      ATOM   1893  N    ASP A 311     94.019  26.524 -15.527  1.00 26.91 A
      ATOM   1894  CA   ASP A 311     93.069  26.369 -16.615  1.00 28.21 A
      ATOM   1895  CB   ASP A 311     93.682  25.504 -17.713  1.00 30.32 A
      ATOM   1896  CG   ASP A 311     92.850  25.494 -18.972  1.00 35.68 A
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      ATOM   1897   OD1  ASP A 311      91.894  24.691 -19.040   1.00 38.27 A
      ATOM   1898   OD2  ASP A 311      93.145  26.302 -19.888   1.00 37.07 A
      ATOM   1899   C    ASP A 311      91.769  25.748 -16.108   1.00 27.22 A
      ATOM   1900   O    ASP A 311      90.678  26.205 -16.449   1.00 29.64 A
   5  ATOM   1901   N    LEU A 312      91.886  24.715 -15.285   1.00 24.32 A
      ATOM   1902   CA   LEU A 312      90.708  24.062 -14.728   1.00 23.48 A
      ATOM   1903   CB   LEU A 312      91.118  22.838 -13.892   1.00 21.65 A
      ATOM   1904   CG   LEU A 312      90.067  22.228 -12.945   1.00 21.40 A
      ATOM   1905   CD1  LEU A 312      88.789  21.917 -13.694   1.00 16.90 A
  10  ATOM   1906   CD2  LEU A 312      90.629  20.960 -12.294   1.00 19.67 A
      ATOM   1907   C    LEU A 312      89.899  25.039 -13.871   1.00 22.73 A
      ATOM   1908   O    LEU A 312      88.684  25.141 -14.021   1.00 22.02 A
      ATOM   1909   N    VAL A 313      90.574  25.754 -12.972   1.00 22.12 A
      ATOM   1910   CA   VAL A 313      89.897  26.715 -12.108   1.00 21.16 A
  15  ATOM   1911   CB   VAL A 313      90.893  27.440 -11.167   1.00 23.49 A
      ATOM   1912   CG1  VAL A 313      90.221  28.679 -10.534   1.00 20.45 A
      ATOM   1913   CG2  VAL A 313      91.369  26.487 -10.080   1.00 21.63 A
      ATOM   1914   C    VAL A 313      89.161  27.771 -12.920   1.00 22.93 A
      ATOM   1915   O    VAL A 313      88.051  28.168 -12.566   1.00 21.46 A
  20  ATOM   1916   N    GLU A 314      89.784  28.235 -14.001   1.00 23.15 A
      ATOM   1917   CA   GLU A 314      89.156  29.252 -14.832   1.00 25.95 A
      ATOM   1918   CB   GLU A 314      90.127  29.762 -15.900   1.00 28.61 A
      ATOM   1919   CG   GLU A 314      91.319  30.523 -15.350   1.00 32.73 A
      ATOM   1920   CD   GLU A 314      92.205  31.059 -16.453   1.00 35.94 A
  25  ATOM   1921   OE1  GLU A 314      92.188  30.467 -17.554   1.00 40.67 A
      ATOM   1922   OE2  GLU A 314      92.923  32.059 -16.225   1.00 37.73 A
      ATOM   1923   C    GLU A 314      87.891  28.742 -15.505   1.00 24.64 A
      ATOM   1924   O    GLU A 314      87.030  29.528 -15.892   1.00 24.01 A
      ATOM   1925   N    LYS A 315      87.775  27.428 -15.654   1.00 23.67 A
  30  ATOM   1926   CA   LYS A 315      86.588  26.874 -16.278   1.00 23.15 A
      ATOM   1927   CB   LYS A 315      86.937  25.594 -17.042   1.00 24.76 A
      ATOM   1928   CG   LYS A 315      87.784  25.845 -18.299   1.00 22.90 A
      ATOM   1929   CD   LYS A 315      88.223  24.541 -18.929   1.00 23.63 A
      ATOM   1930   CE   LYS A 315      89.079  24.772 -20.153   1.00 23.20 A
  35  ATOM   1931   NZ   LYS A 315      88.332  25.582 -21.142   1.00 29.09 A
      ATOM   1932   C    LYS A 315      85.509  26.600 -15.244   1.00 23.08 A
      ATOM   1933   O    LYS A 315      84.386  26.250 -15.596   1.00 23.63 A
      ATOM   1934   N    LEU A 316      85.852  26.773 -13.969   1.00 21.74 A
      ATOM   1935   CA   LEU A 316      84.910  26.547 -12.876   1.00 21.89 A
  40  ATOM   1936   CB   LEU A 316      85.569  25.738 -11.760   1.00 20.54 A
      ATOM   1937   CG   LEU A 316      85.841  24.269 -12.090   1.00 20.69 A
      ATOM   1938   CD1  LEU A 316      86.600  23.611 -10.947   1.00 17.08 A
      ATOM   1939   CD2  LEU A 316      84.514  23.558 -12.336   1.00 19.15 A
      ATOM   1940   C    LEU A 316      84.404  27.860 -12.312   1.00 23.66 A
  45  ATOM   1941   O    LEU A 316      83.215  28.005 -12.013   1.00 25.40 A
      ATOM   1942   N    LEU A 317      85.310  28.816 -12.149   1.00 24.48 A
      ATOM   1943   CA   LEU A 317      84.933  30.121 -11.637   1.00 25.52 A
      ATOM   1944   CB   LEU A 317      86.123  30.793 -10.936   1.00 24.23 A
      ATOM   1945   CG   LEU A 317      86.656  30.035  -9.719   1.00 21.22 A
  50  ATOM   1946   CD1  LEU A 317      87.718  30.859  -9.015   1.00 23.73 A
      ATOM   1947   CD2  LEU A 317      85.515  29.730  -8.773   1.00 21.36 A
      ATOM   1948   C    LEU A 317      84.459  30.953 -12.815   1.00 26.00 A
      ATOM   1949   O    LEU A 317      85.148  31.856 -13.286   1.00 28.02 A
      ATOM   1950   N    VAL A 318      83.272  30.611 -13.293   1.00 27.50 A
  55  ATOM   1951   CA   VAL A 318      82.643  31.286 -14.421   1.00 28.43 A
      ATOM   1952   CB   VAL A 318      82.365  30.280 -15.558   1.00 28.13 A
      ATOM   1953   CG1  VAL A 318      81.624  30.953 -16.694   1.00 29.20 A
      ATOM   1954   CG2  VAL A 318      83.677  29.689 -16.045   1.00 27.12 A
      ATOM   1955   C    VAL A 318      81.331  31.842 -13.896   1.00 29.21 A
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      ATOM   1956  O    VAL A 318      80.559  31.120 -13.255  1.00 30.06 A
      ATOM   1957  N    LEU A 319      81.082  33.121 -14.150  1.00 29.94 A
      ATOM   1958  CA   LEU A 319      79.858  33.758 -13.671  1.00 30.57 A
      ATOM   1959  CB   LEU A 319      79.808  35.214 -14.133  1.00 32.89 A
 5    ATOM   1960  CG   LEU A 319      80.908  36.115 -13.553  1.00 35.26 A
      ATOM   1961  CD1  LEU A 319      80.741  37.551 -14.059  1.00 34.63 A
      ATOM   1962  CD2  LEU A 319      80.835  36.078 -12.028  1.00 34.01 A
      ATOM   1963  C    LEU A 319      78.598  33.029 -14.117  1.00 30.01 A
      ATOM   1964  O    LEU A 319      77.704  32.768 -13.316  1.00 30.48 A
10    ATOM   1965  N    ASP A 320      78.527  32.695 -15.397  1.00 29.97 A
      ATOM   1966  CA   ASP A 320      77.362  31.996 -15.919  1.00 29.97 A
      ATOM   1967  CB   ASP A 320      77.393  31.981 -17.444  1.00 32.99 A
      ATOM   1968  CG   ASP A 320      76.116  31.435 -18.040  1.00 36.86 A
      ATOM   1969  OD1  ASP A 320      75.495  30.548 -17.412  1.00 38.81 A
15    ATOM   1970  OD2  ASP A 320      75.739  31.883 -19.142  1.00 38.26 A
      ATOM   1971  C    ASP A 320      77.373  30.569 -15.402  1.00 28.61 A
      ATOM   1972  O    ASP A 320      78.244  29.786 -15.758  1.00 28.87 A
      ATOM   1973  N    ALA A 321      76.398  30.233 -14.566  1.00 28.88 A
      ATOM   1974  CA   ALA A 321      76.311  28.897 -13.980  1.00 28.04 A
20    ATOM   1975  CB   ALA A 321      75.156  28.842 -12.990  1.00 25.11 A
      ATOM   1976  C    ALA A 321      76.151  27.794 -15.021  1.00 27.83 A
      ATOM   1977  O    ALA A 321      76.500  26.643 -14.773  1.00 27.26 A
      ATOM   1978  N    THR A 322      75.632  28.150 -16.190  1.00 27.45 A
      ATOM   1979  CA   THR A 322      75.413  27.167 -17.243  1.00 27.18 A
25    ATOM   1980  CB   THR A 322      74.294  27.615 -18.191  1.00 26.99 A
      ATOM   1981  OG1  THR A 322      74.739  28.753 -18.940  1.00 27.15 A
      ATOM   1982  CG2  THR A 322      73.045  27.997 -17.399  1.00 23.11 A
      ATOM   1983  C    THR A 322      76.654  26.909 -18.077  1.00 28.31 A
      ATOM   1984  O    THR A 322      76.605  26.133 -19.027  1.00 28.80 A
30    ATOM   1985  N    LYS A 323      77.769  27.546 -17.727  1.00 28.30 A
      ATOM   1986  CA   LYS A 323      78.990  27.348 -18.491  1.00 28.51 A
      ATOM   1987  CB   LYS A 323      79.392  28.651 -19.172  1.00 30.27 A
      ATOM   1988  CG   LYS A 323      78.305  29.160 -20.095  1.00 35.72 A
      ATOM   1989  CD   LYS A 323      78.839  30.081 -21.170  1.00 37.65 A
35    ATOM   1990  CE   LYS A 323      77.722  30.472 -22.131  1.00 39.59 A
      ATOM   1991  NZ   LYS A 323      77.088  29.263 -22.733  1.00 40.41 A
      ATOM   1992  C    LYS A 323      80.154  26.799 -17.683  1.00 28.68 A
      ATOM   1993  O    LYS A 323      81.298  26.847 -18.119  1.00 29.54 A
      ATOM   1994  N    ARG A 324      79.866  26.271 -16.503  1.00 27.43 A
40    ATOM   1995  CA   ARG A 324      80.921  25.709 -15.684  1.00 25.01 A
      ATOM   1996  CB   ARG A 324      80.559  25.800 -14.205  1.00 22.81 A
      ATOM   1997  CG   ARG A 324      80.489  27.223 -13.715  1.00 21.68 A
      ATOM   1998  CD   ARG A 324      80.036  27.315 -12.277  1.00 20.65 A
      ATOM   1999  NE   ARG A 324      79.655  28.689 -11.971  1.00 21.18 A
45    ATOM   2000  CZ   ARG A 324      78.645  29.029 -11.180  1.00 19.20 A
      ATOM   2001  NH1  ARG A 324      77.909  28.093 -10.598  1.00 19.05 A
      ATOM   2002  NH2  ARG A 324      78.349  30.307 -11.004  1.00 19.45 A
      ATOM   2003  C    ARG A 324      81.161  24.264 -16.073  1.00 24.64 A
      ATOM   2004  O    ARG A 324      80.219  23.501 -16.290  1.00 23.78 A
50    ATOM   2005  N    LEU A 325      82.433  23.902 -16.177  1.00 23.92 A
      ATOM   2006  CA   LEU A 325      82.809  22.541 -16.526  1.00 25.53 A
      ATOM   2007  CB   LEU A 325      84.336  22.422 -16.558  1.00 25.18 A
      ATOM   2008  CG   LEU A 325      84.995  21.178 -17.149  1.00 25.63 A
      ATOM   2009  CD1  LEU A 325      84.541  20.949 -18.590  1.00 25.39 A
55    ATOM   2010  CD2  LEU A 325      86.500  21.364 -17.087  1.00 23.10 A
      ATOM   2011  C    LEU A 325      82.224  21.610 -15.466  1.00 25.01 A
      ATOM   2012  O    LEU A 325      82.449  21.809 -14.278  1.00 23.81 A
      ATOM   2013  N    GLY A 326      81.450  20.616 -15.900  1.00 26.41 A
      ATOM   2014  CA   GLY A 326      80.850  19.683 -14.964  1.00 26.13 A
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      ATOM   2015   C     GLY A 326      79.338  19.771 -14.835   1.00 29.31 A
      ATOM   2016   O     GLY A 326      78.697  18.795 -14.444   1.00 31.67 A
      ATOM   2017   N     CYS A 327      78.753  20.918 -15.162   1.00 29.49 A
      ATOM   2018   CA    CYS A 327      77.308  21.073 -15.042   1.00 31.91 A
    5 ATOM   2019   CB    CYS A 327      76.935  22.556 -14.982   1.00 31.78 A
      ATOM   2020   SG    CYS A 327      77.084  23.397 -16.552   1.00 38.33 A
      ATOM   2021   C     CYS A 327      76.539  20.385 -16.175   1.00 32.76 A
      ATOM   2022   O     CYS A 327      77.096  20.069 -17.228   1.00 32.18 A
      ATOM   2023   N     GLU A 328      75.248  20.175 -15.952   1.00 33.60 A
   10 ATOM   2024   CA    GLU A 328      74.400  19.497 -16.921   1.00 36.82 A
      ATOM   2025   CB    GLU A 328      72.951  19.479 -16.408   1.00 41.60 A
      ATOM   2026   CG    GLU A 328      72.845  19.437 -14.863   1.00 48.92 A
      ATOM   2027   CD    GLU A 328      72.000  18.279 -14.321   1.00 51.75 A
      ATOM   2028   OE1   GLU A 328      72.393  17.103 -14.509   1.00 52.77 A
   15 ATOM   2029   OE2   GLU A 328      70.948  18.550 -13.696   1.00 52.29 A
      ATOM   2030   C     GLU A 328      74.466  20.120 -18.317   1.00 35.83 A
      ATOM   2031   O     GLU A 328      74.618  19.412 -19.318   1.00 34.85 A
      ATOM   2032   N     GLU A 329      74.370  21.443 -18.378   1.00 33.75 A
      ATOM   2033   CA    GLU A 329      74.399  22.146 -19.650   1.00 32.37 A
   20 ATOM   2034   CB    GLU A 329      74.153  23.640 -19.439   1.00 34.70 A
      ATOM   2035   CG    GLU A 329      72.898  23.972 -18.640   1.00 38.53 A
      ATOM   2036   CD    GLU A 329      73.017  23.589 -17.172   1.00 41.60 A
      ATOM   2037   OE1   GLU A 329      74.048  23.926 -16.548   1.00 44.03 A
      ATOM   2038   OE2   GLU A 329      72.080  22.958 -16.636   1.00 44.74 A
   25 ATOM   2039   C     GLU A 329      75.711  21.947 -20.399   1.00 30.96 A
      ATOM   2040   O     GLU A 329      75.757  22.114 -21.617   1.00 28.90 A
      ATOM   2041   N     MET A 330      76.773  21.605 -19.673   1.00 29.20 A
      ATOM   2042   CA    MET A 330      78.075  21.379 -20.291   1.00 27.90 A
      ATOM   2043   CB    MET A 330      79.190  22.010 -19.455   1.00 30.57 A
   30 ATOM   2044   CG    MET A 330      79.189  23.536 -19.446   1.00 32.33 A
      ATOM   2045   SD    MET A 330      79.488  24.269 -21.070   1.00 36.55 A
      ATOM   2046   CE    MET A 330      81.257  24.001 -21.239   1.00 35.61 A
      ATOM   2047   C     MET A 330      78.319  19.883 -20.443   1.00 27.32 A
      ATOM   2048   O     MET A 330      79.452  19.436 -20.606   1.00 25.82 A
   35 ATOM   2049   N     GLU A 331      77.232  19.122 -20.365   1.00 25.18 A
      ATOM   2050   CA    GLU A 331      77.246  17.677 -20.526   1.00 24.56 A
      ATOM   2051   CB    GLU A 331      77.922  17.295 -21.848   1.00 23.55 A
      ATOM   2052   CG    GLU A 331      77.395  18.099 -23.030   1.00 25.42 A
      ATOM   2053   CD    GLU A 331      75.867  18.176 -23.082   1.00 28.50 A
   40 ATOM   2054   OE1   GLU A 331      75.338  19.094 -23.750   1.00 31.00 A
      ATOM   2055   OE2   GLU A 331      75.190  17.323 -22.467   1.00 30.18 A
      ATOM   2056   C     GLU A 331      77.804  16.834 -19.396   1.00 24.55 A
      ATOM   2057   O     GLU A 331      78.327  15.745 -19.629   1.00 25.02 A
      ATOM   2058   N     GLY A 332      77.692  17.339 -18.172   1.00 22.83 A
   45 ATOM   2059   CA    GLY A 332      78.098  16.564 -17.017   1.00 20.57 A
      ATOM   2060   C     GLY A 332      79.541  16.408 -16.606   1.00 20.81 A
      ATOM   2061   O     GLY A 332      80.430  17.167 -16.999   1.00 19.36 A
      ATOM   2062   N     TYR A 333      79.753  15.374 -15.801   1.00 20.19 A
      ATOM   2063   CA    TYR A 333      81.053  15.056 -15.243   1.00 20.12 A
   50 ATOM   2064   CB    TYR A 333      80.860  14.127 -14.052   1.00 20.05 A
      ATOM   2065   CG    TYR A 333      80.483  14.902 -12.828   1.00 21.40 A
      ATOM   2066   CD1   TYR A 333      81.464  15.367 -11.956   1.00 22.85 A
      ATOM   2067   CE1   TYR A 333      81.141  16.181 -10.878   1.00 22.91 A
      ATOM   2068   CD2   TYR A 333      79.160  15.266 -12.590   1.00 21.24 A
   55 ATOM   2069   CE2   TYR A 333      78.827  16.082 -11.513   1.00 22.71 A
      ATOM   2070   CZ    TYR A 333      79.827  16.535 -10.670   1.00 21.44 A
      ATOM   2071   OH    TYR A 333      79.522  17.358  -9.621   1.00 24.72 A
      ATOM   2072   C     TYR A 333      82.076  14.484 -16.192   1.00 20.38 A
      ATOM   2073   O     TYR A 333      83.277  14.533 -15.910   1.00 18.82 A
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      ATOM   2074  N    GLY A 334      81.610  13.942 -17.313  1.00 20.41 A
      ATOM   2075  CA   GLY A 334      82.534  13.378 -18.280  1.00 20.48 A
      ATOM   2076  C    GLY A 334      83.611  14.367 -18.693  1.00 20.12 A
      ATOM   2077  O    GLY A 334      84.808  14.105 -18.539  1.00 21.13 A
   5  ATOM   2078  N    PRO A 335      83.216  15.524 -19.230  1.00 19.75 A
      ATOM   2079  CD   PRO A 335      81.872  15.899 -19.699  1.00 19.25 A
      ATOM   2080  CA   PRO A 335      84.218  16.512 -19.644  1.00 19.66 A
      ATOM   2081  CB   PRO A 335      83.366  17.644 -20.212  1.00 17.92 A
      ATOM   2082  CG   PRO A 335      82.184  16.901 -20.784  1.00 19.24 A
  10  ATOM   2083  C    PRO A 335      85.115  16.967 -18.495  1.00 19.62 A
      ATOM   2084  O    PRO A 335      86.315  17.154 -18.679  1.00 21.87 A
      ATOM   2085  N    LEU A 336      84.538  17.131 -17.307  1.00 19.91 A
      ATOM   2086  CA   LEU A 336      85.312  17.576 -16.147  1.00 19.06 A
      ATOM   2087  CB   LEU A 336      84.406  17.767 -14.914  1.00 18.05 A
  15  ATOM   2088  CG   LEU A 336      85.073  18.119 -13.571  1.00 18.25 A
      ATOM   2089  CD1  LEU A 336      86.049  19.280 -13.746  1.00 15.57 A
      ATOM   2090  CD2  LEU A 336      84.009  18.473 -12.538  1.00 15.31 A
      ATOM   2091  C    LEU A 336      86.424  16.594 -15.832  1.00 17.85 A
      ATOM   2092  O    LEU A 336      87.582  16.986 -15.690  1.00 17.14 A
  20  ATOM   2093  N    LYS A 337      86.075  15.317 -15.732  1.00 17.96 A
      ATOM   2094  CA   LYS A 337      87.061  14.289 -15.438  1.00 19.15 A
      ATOM   2095  CB   LYS A 337      86.352  12.966 -15.134  1.00 21.53 A
      ATOM   2096  CG   LYS A 337      85.571  13.025 -13.821  1.00 25.58 A
      ATOM   2097  CD   LYS A 337      84.484  11.956 -13.715  1.00 26.69 A
  25  ATOM   2098  CE   LYS A 337      85.063  10.566 -13.571  1.00 29.78 A
      ATOM   2099  NZ   LYS A 337      83.979   9.552 -13.368  1.00 30.74 A
      ATOM   2100  C    LYS A 337      88.065  14.120 -16.576  1.00 21.13 A
      ATOM   2101  O    LYS A 337      89.170  13.631 -16.362  1.00 21.11 A
      ATOM   2102  N    ALA A 338      87.697  14.549 -17.780  1.00 21.55 A
  30  ATOM   2103  CA   ALA A 338      88.600  14.426 -18.922  1.00 22.23 A
      ATOM   2104  CB   ALA A 338      87.802  14.368 -20.221  1.00 21.66 A
      ATOM   2105  C    ALA A 338      89.604  15.569 -18.988  1.00 23.04 A
      ATOM   2106  O    ALA A 338      90.518  15.541 -19.800  1.00 22.63 A
      ATOM   2107  N    HIS A 339      89.447  16.570 -18.131  1.00 23.26 A
  35  ATOM   2108  CA   HIS A 339      90.362  17.705 -18.148  1.00 23.33 A
      ATOM   2109  CB   HIS A 339      90.017  18.680 -17.027  1.00 22.99 A
      ATOM   2110  CG   HIS A 339      90.696  20.004 -17.156  1.00 23.43 A
      ATOM   2111  CD2  HIS A 339      90.279  21.168 -17.710  1.00 24.32 A
      ATOM   2112  ND1  HIS A 339      91.993  20.219 -16.741  1.00 22.64 A
  40  ATOM   2113  CE1  HIS A 339      92.346  21.459 -17.036  1.00 24.03 A
      ATOM   2114  NE2  HIS A 339      91.324  22.056 -17.626  1.00 23.65 A
      ATOM   2115  C    HIS A 339      91.833  17.302 -18.046  1.00 24.36 A
      ATOM   2116  O    HIS A 339      92.186  16.376 -17.317  1.00 24.27 A
      ATOM   2117  N    PRO A 340      92.713  17.999 -18.788  1.00 25.89 A
  45  ATOM   2118  CD   PRO A 340      92.394  19.050 -19.777  1.00 26.69 A
      ATOM   2119  CA   PRO A 340      94.151  17.714 -18.785  1.00 26.69 A
      ATOM   2120  CB   PRO A 340      94.727  18.861 -19.613  1.00 26.46 A
      ATOM   2121  CG   PRO A 340      93.654  19.090 -20.636  1.00 25.56 A
      ATOM   2122  C    PRO A 340      94.772  17.629 -17.396  1.00 27.13 A
  50  ATOM   2123  O    PRO A 340      95.686  16.841 -17.167  1.00 28.89 A
      ATOM   2124  N    PHE A 341      94.281  18.438 -16.466  1.00 26.76 A
      ATOM   2125  CA   PHE A 341      94.815  18.417 -15.110  1.00 25.83 A
      ATOM   2126  CB   PHE A 341      94.100  19.451 -14.239  1.00 24.72 A
      ATOM   2127  CG   PHE A 341      94.628  19.527 -12.835  1.00 23.75 A
  55  ATOM   2128  CD1  PHE A 341      95.890  20.060 -12.578  1.00 24.62 A
      ATOM   2129  CD2  PHE A 341      93.867  19.066 -11.765  1.00 24.82 A
      ATOM   2130  CE1  PHE A 341      96.386  20.136 -11.273  1.00 23.48 A
      ATOM   2131  CE2  PHE A 341      94.352  19.136 -10.454  1.00 23.61 A
      ATOM   2132  CZ   PHE A 341      95.614  19.673 -10.209  1.00 23.80 A
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      ATOM   2133   C    PHE A 341      94.684   17.039 -14.458   1.00 25.53 A
      ATOM   2134   O    PHE A 341      95.453   16.698 -13.572   1.00 25.60 A
      ATOM   2135   N    PHE A 342      93.718   16.248 -14.905   1.00 26.56 A
      ATOM   2136   CA   PHE A 342      93.486   14.928 -14.327   1.00 28.32 A
   5  ATOM   2137   CB   PHE A 342      91.992   14.724 -14.095   1.00 25.63 A
      ATOM   2138   CG   PHE A 342      91.374   15.731 -13.169   1.00 24.19 A
      ATOM   2139   CD1  PHE A 342      91.830   15.868 -11.859   1.00 24.72 A
      ATOM   2140   CD2  PHE A 342      90.285   16.492 -13.579   1.00 21.46 A
      ATOM   2141   CE1  PHE A 342      91.200   16.744 -10.969   1.00 22.95 A
  10  ATOM   2142   CE2  PHE A 342      89.649   17.368 -12.699   1.00 19.82 A
      ATOM   2143   CZ   PHE A 342      90.105   17.491 -11.393   1.00 20.87 A
      ATOM   2144   C    PHE A 342      94.009   13.811 -15.217   1.00 31.08 A
      ATOM   2145   O    PHE A 342      93.655   12.643 -15.047   1.00 32.72 A
      ATOM   2146   N    GLU A 343      94.863   14.183 -16.159   1.00 33.50 A
  15  ATOM   2147   CA   GLU A 343      95.446   13.250 -17.114   1.00 36.10 A
      ATOM   2148   CB   GLU A 343      96.738   13.853 -17.676   1.00 38.76 A
      ATOM   2149   CG   GLU A 343      96.842   13.883 -19.194   1.00 44.39 A
      ATOM   2150   CD   GLU A 343      96.911   15.307 -19.750   1.00 48.43 A
      ATOM   2151   OE1  GLU A 343      97.665   16.143 -19.190   1.00 47.87 A
  20  ATOM   2152   OE2  GLU A 343      96.217   15.587 -20.755   1.00 49.34 A
      ATOM   2153   C    GLU A 343      95.747   11.855 -16.552   1.00 35.54 A
      ATOM   2154   O    GLU A 343      95.210   10.847 -17.019   1.00 33.70 A
      ATOM   2155   N    SER A 344      96.604   11.810 -15.539   1.00 34.66 A
      ATOM   2156   CA   SER A 344      97.024   10.545 -14.956   1.00 33.91 A
  25  ATOM   2157   CB   SER A 344      98.421   10.712 -14.360   1.00 33.13 A
      ATOM   2158   OG   SER A 344      98.387   11.578 -13.242   1.00 30.32 A
      ATOM   2159   C    SER A 344      96.116    9.927 -13.886   1.00 33.50 A
      ATOM   2160   O    SER A 344      96.510    8.962 -13.234   1.00 32.98 A
      ATOM   2161   N    VAL A 345      94.908   10.448 -13.713   1.00 31.80 A
  30  ATOM   2162   CA   VAL A 345      94.021    9.903 -12.689   1.00 31.70 A
      ATOM   2163   CB   VAL A 345      93.039   10.981 -12.152   1.00 31.20 A
      ATOM   2164   CG1  VAL A 345      92.153   10.375 -11.079   1.00 29.96 A
      ATOM   2165   CG2  VAL A 345      93.799   12.176 -11.601   1.00 27.23 A
      ATOM   2166   C    VAL A 345      93.175    8.707 -13.133   1.00 32.88 A
  35  ATOM   2167   O    VAL A 345      92.597    8.712 -14.223   1.00 32.39 A
      ATOM   2168   N    THR A 346      93.109    7.688 -12.279   1.00 31.88 A
      ATOM   2169   CA   THR A 346      92.285    6.511 -12.539   1.00 32.94 A
      ATOM   2170   CB   THR A 346      93.007    5.209 -12.149   1.00 35.61 A
      ATOM   2171   OG1  THR A 346      94.137    5.012 -13.013   1.00 37.85 A
  40  ATOM   2172   CG2  THR A 346      92.060    4.022 -12.267   1.00 32.32 A
      ATOM   2173   C    THR A 346      91.051    6.700 -11.658   1.00 33.08 A
      ATOM   2174   O    THR A 346      91.083    6.460 -10.448   1.00 34.21 A
      ATOM   2175   N    TRP A 347      89.964    7.142 -12.274   1.00 31.78 A
      ATOM   2176   CA   TRP A 347      88.741    7.427 -11.549   1.00 31.53 A
  45  ATOM   2177   CB   TRP A 347      87.769    8.171 -12.463   1.00 28.28 A
      ATOM   2178   CG   TRP A 347      88.303    9.476 -12.937   1.00 23.66 A
      ATOM   2179   CD2  TRP A 347      88.263   10.722 -12.231   1.00 23.03 A
      ATOM   2180   CE2  TRP A 347      88.927   11.678 -13.031   1.00 20.77 A
      ATOM   2181   CE3  TRP A 347      87.731   11.121 -10.999   1.00 20.57 A
  50  ATOM   2182   CD1  TRP A 347      88.969    9.718 -14.102   1.00 21.92 A
      ATOM   2183   NE1  TRP A 347      89.348   11.041 -14.168   1.00 22.23 A
      ATOM   2184   CZ2  TRP A 347      89.074   13.008 -12.640   1.00 21.04 A
      ATOM   2185   CZ3  TRP A 347      87.876   12.444 -10.611   1.00 20.14 A
      ATOM   2186   CH2  TRP A 347      88.544   13.372 -11.430   1.00 20.44 A
  55  ATOM   2187   C    TRP A 347      88.014    6.267 -10.899   1.00 34.19 A
      ATOM   2188   O    TRP A 347      87.382    6.440  -9.854   1.00 34.97 A
      ATOM   2189   N    GLU A 348      88.108    5.089 -11.502   1.00 35.77 A
      ATOM   2190   CA   GLU A 348      87.405    3.913 -11.000   1.00 36.41 A
      ATOM   2191   CB   GLU A 348      87.600    2.740 -11.977   1.00 36.95 A
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     ATOM   2192  CG   GLU A 348      88.990    2.626 -12.588   0.00 36.86 A
     ATOM   2193  CD   GLU A 348      89.173    3.510 -13.812   0.00 36.91 A
     ATOM   2194  OE1  GLU A 348      89.119    4.750 -13.677   0.00 36.92 A
     ATOM   2195  OE2  GLU A 348      89.370    2.960 -14.916   0.00 36.92 A
 5   ATOM   2196  C    GLU A 348      87.668    3.435  -9.563   1.00 36.38 A
     ATOM   2197  O    GLU A 348      86.773    2.866  -8.935   1.00 38.29 A
     ATOM   2198  N    ASN A 349      88.857    3.669  -9.019   1.00 34.41 A
     ATOM   2199  CA   ASN A 349      89.134    3.182  -7.668   1.00 33.02 A
     ATOM   2200  CB   ASN A 349      89.848    1.844  -7.765   1.00 34.07 A
10   ATOM   2201  CG   ASN A 349      91.220    1.978  -8.381   1.00 35.48 A
     ATOM   2202  OD1  ASN A 349      91.409    2.742  -9.324   1.00 35.13 A
     ATOM   2203  ND2  ASN A 349      92.188    1.235  -7.852   1.00 38.04 A
     ATOM   2204  C    ASN A 349      89.970    4.116  -6.804   1.00 30.73 A
     ATOM   2205  O    ASN A 349      90.878    3.672  -6.106   1.00 30.66 A
15   ATOM   2206  N    LEU A 350      89.662    5.403  -6.850   1.00 28.42 A
     ATOM   2207  CA   LEU A 350      90.390    6.397  -6.072   1.00 27.13 A
     ATOM   2208  CB   LEU A 350      89.655    7.737  -6.128   1.00 25.19 A
     ATOM   2209  CG   LEU A 350      89.803    8.543  -7.418   1.00 25.97 A
     ATOM   2210  CD1  LEU A 350      88.841    9.732  -7.428   1.00 26.30 A
20   ATOM   2211  CD2  LEU A 350      91.242    9.014  -7.521   1.00 27.40 A
     ATOM   2212  C    LEU A 350      90.581    5.999  -4.614   1.00 26.30 A
     ATOM   2213  O    LEU A 350      91.645    6.201  -4.036   1.00 26.73 A
     ATOM   2214  N    HIS A 351      89.547    5.424  -4.024   1.00 27.16 A
     ATOM   2215  CA   HIS A 351      89.593    5.044  -2.622   1.00 28.60 A
25   ATOM   2216  CB   HIS A 351      88.184    4.748  -2.124   1.00 29.94 A
     ATOM   2217  CG   HIS A 351      88.111    4.503  -0.653   1.00 30.99 A
     ATOM   2218  CD2  HIS A 351      88.324    5.329   0.399   1.00 31.86 A
     ATOM   2219  ND1  HIS A 351      87.790    3.275  -0.118   1.00 29.43 A
     ATOM   2220  CE1  HIS A 351      87.804    3.356   1.202   1.00 31.81 A
30   ATOM   2221  NE2  HIS A 351      88.125    4.592   1.541   1.00 32.90 A
     ATOM   2222  C    HIS A 351      90.509    3.873  -2.298   1.00 28.99 A
     ATOM   2223  O    HIS A 351      90.875    3.677  -1.141   1.00 28.53 A
     ATOM   2224  N    GLN A 352      90.865    3.088  -3.307   1.00 30.57 A
     ATOM   2225  CA   GLN A 352      91.764    1.959  -3.095   1.00 33.42 A
35   ATOM   2226  CB   GLN A 352      91.563    0.880  -4.162   1.00 35.01 A
     ATOM   2227  CG   GLN A 352      90.696   -0.289  -3.737   1.00 37.07 A
     ATOM   2228  CD   GLN A 352      89.275    0.123  -3.474   1.00 39.83 A
     ATOM   2229  OE1  GLN A 352      88.676    0.856  -4.267   1.00 41.90 A
     ATOM   2230  NE2  GLN A 352      88.712   -0.351  -2.365   1.00 39.86 A
40   ATOM   2231  C    GLN A 352      93.197    2.457  -3.173   1.00 33.85 A
     ATOM   2232  O    GLN A 352      94.126    1.782  -2.734   1.00 35.32 A
     ATOM   2233  N    GLN A 353      93.368    3.647  -3.734   1.00 32.53 A
     ATOM   2234  CA   GLN A 353      94.693    4.216  -3.886   1.00 32.78 A
     ATOM   2235  CB   GLN A 353      94.666    5.298  -4.965   1.00 32.07 A
45   ATOM   2236  CG   GLN A 353      94.373    4.739  -6.345   1.00 31.94 A
     ATOM   2237  CD   GLN A 353      94.206    5.819  -7.382   1.00 32.50 A
     ATOM   2238  OE1  GLN A 353      95.008    6.749  -7.452   1.00 35.33 A
     ATOM   2239  NE2  GLN A 353      93.167    5.701  -8.204   1.00 31.02 A
     ATOM   2240  C    GLN A 353      95.246    4.779  -2.585   1.00 33.27 A
50   ATOM   2241  O    GLN A 353      94.494    5.209  -1.717   1.00 32.38 A
     ATOM   2242  N    THR A 354      96.570    4.746  -2.462   1.00 33.29 A
     ATOM   2243  CA   THR A 354      97.239    5.267  -1.280   1.00 34.35 A
     ATOM   2244  CB   THR A 354      98.615    4.601  -1.069   1.00 35.88 A
     ATOM   2245  OG1  THR A 354      98.430    3.232  -0.690   1.00 36.70 A
55   ATOM   2246  CG2  THR A 354      99.403    5.325   0.027   1.00 36.08 A
     ATOM   2247  C    THR A 354      97.440    6.760  -1.478   1.00 33.06 A
     ATOM   2248  O    THR A 354      98.120    7.181  -2.403   1.00 31.33 A
     ATOM   2249  N    PRO A 355      96.844    7.581  -0.604   1.00 33.40 A
     ATOM   2250  CD   PRO A 355      96.000    7.220   0.544   1.00 31.90 A
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      ATOM   2251  CA  PRO A 355      96.974   9.035  -0.710  1.00 34.90 A
      ATOM   2252  CB  PRO A 355      96.156   9.543   0.475  1.00 33.68 A
      ATOM   2253  CG  PRO A 355      95.160   8.452   0.698  1.00 33.37 A
      ATOM   2254  C   PRO A 355      98.428   9.475  -0.623  1.00 36.27 A
  5   ATOM   2255  O   PRO A 355      99.196   8.960   0.191  1.00 35.70 A
      ATOM   2256  N   PRO A 356      98.824  10.433  -1.464  1.00 37.66 A
      ATOM   2257  CD  PRO A 356      98.010  11.198  -2.423  1.00 38.22 A
      ATOM   2258  CA  PRO A 356     100.205  10.916  -1.441  1.00 39.93 A
      ATOM   2259  CB  PRO A 356     100.227  11.944  -2.570  1.00 38.83 A
 10   ATOM   2260  CG  PRO A 356      98.818  12.466  -2.580  1.00 38.26 A
      ATOM   2261  C   PRO A 356     100.532  11.534  -0.085  1.00 41.87 A
      ATOM   2262  O   PRO A 356      99.696  12.209   0.506  1.00 40.91 A
      ATOM   2263  N   ALA A 357     101.741  11.286   0.409  1.00 46.23 A
      ATOM   2264  CA  ALA A 357     102.160  11.837   1.691  1.00 51.16 A
 15   ATOM   2265  CB  ALA A 357     103.587  11.410   2.001  1.00 49.78 A
      ATOM   2266  C   ALA A 357     102.077  13.354   1.589  1.00 54.64 A
      ATOM   2267  O   ALA A 357     102.591  13.942   0.637  1.00 55.14 A
      ATOM   2268  N   LEU A 358     101.419  13.985   2.559  1.00 58.59 A
      ATOM   2269  CA  LEU A 358     101.276  15.437   2.552  1.00 62.92 A
 20   ATOM   2270  CB  LEU A 358     100.107  15.866   3.441  1.00 62.51 A
      ATOM   2271  CG  LEU A 358      98.732  15.752   2.783  1.00 63.05 A
      ATOM   2272  CD1 LEU A 358      97.657  16.251   3.737  1.00 63.34 A
      ATOM   2273  CD2 LEU A 358      98.721  16.570   1.494  1.00 62.56 A
      ATOM   2274  C   LEU A 358     102.536  16.173   2.984  1.00 65.81 A
 25   ATOM   2275  O   LEU A 358     102.675  16.559   4.148  1.00 66.45 A
      ATOM   2276  N   THR A 359     103.441  16.368   2.025  1.00 69.31 A
      ATOM   2277  CA  THR A 359     104.715  17.057   2.236  1.00 72.25 A
      ATOM   2278  CB  THR A 359     104.519  18.594   2.271  1.00 73.17 A
      ATOM   2279  OG1 THR A 359     103.564  18.937   3.284  1.00 75.38 A
 30   ATOM   2280  CG2 THR A 359     104.030  19.101   0.916  1.00 72.93 A
      ATOM   2281  C   THR A 359     105.468  16.627   3.497  1.00 73.76 A
      ATOM   2282  O   THR A 359     105.011  15.683   4.180  1.00 74.61 A
      ATOM   2283  OXT THR A 359     106.523  17.237   3.780  1.00 75.50 A
      ATOM   2284  OH2 TIP S   1      82.965  32.402  -3.946  1.00 13.32 S
 35   ATOM   2285  OH2 TIP S   2      91.556  13.784 -17.557  1.00 22.11 S
      ATOM   2286  OH2 TIP S   3      87.391  33.155  -1.722  1.00 22.84 S
      ATOM   2287  OH2 TIP S   4      69.033   3.499  13.879  1.00 22.91 S
      ATOM   2288  OH2 TIP S   5      81.088  19.368 -18.406  1.00 24.13 S
      ATOM   2289  OH2 TIP S   6      75.641  16.130   8.209  1.00 26.44 S
 40   ATOM   2290  OH2 TIP S   7      74.760  20.961   3.347  1.00 27.74 S
      ATOM   2291  OH2 TIP S   8      75.152   6.784   5.545  1.00 22.53 S
      ATOM   2292  OH2 TIP S   9      77.282  11.807 -17.666  1.00 35.96 S
      ATOM   2293  OH2 TIP S  10      81.785   8.968  -8.072  1.00 25.44 S
      ATOM   2294  OH2 TIP S  11      78.609  24.424  -2.074  1.00 22.05 S
 45   ATOM   2295  OH2 TIP S  12      94.883   8.256  -9.981  1.00 37.17 S
      ATOM   2296  OH2 TIP S  13      73.164  38.970  -1.072  1.00 35.95 S
      ATOM   2297  OH2 TIP S  14      78.806  27.556  -3.116  1.00 39.27 S
      ATOM   2298  OH2 TIP S  15      89.050   8.041  10.604  1.00 23.40 S
      ATOM   2299  OH2 TIP S  16      73.265  40.376  -3.301  1.00 26.94 S
 50   ATOM   2300  OH2 TIP S  18      84.081  33.371   4.243  1.00 30.61 S
      ATOM   2301  OH2 TIP S  19      78.571  -0.530  16.531  1.00 26.61 S
      ATOM   2302  OH2 TIP S  21      70.088   3.703  17.559  1.00 28.94 S
      ATOM   2303  OH2 TIP S  22      79.212  13.330 -18.791  1.00 26.94 S
      ATOM   2304  OH2 TIP S  23      91.672  10.665 -16.153  1.00 30.26 S
 55   ATOM   2305  OH2 TIP S  25     104.173  17.689  -7.204  1.00 31.65 S
      ATOM   2306  OH2 TIP S  27      87.578  18.354 -20.604  1.00 25.98 S
      ATOM   2307  OH2 TIP S  28      82.272  34.870 -16.021  1.00 27.02 S
      ATOM   2308  OH2 TIP S  29     100.496  13.074  -9.812  1.00 37.92 S
      ATOM   2309  OH2 TIP S  30      65.147  10.515  28.440  1.00 40.03 S
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     ATOM    2310  OH2 TIP S   31      90.721  38.800   -4.631  1.00 42.09 S
     ATOM    2311  OH2 TIP S   32      83.367  23.841   15.654  1.00 36.15 S
     ATOM    2312  OH2 TIP S   33      87.754  11.897   23.760  1.00 26.76 S
     ATOM    2313  OH2 TIP S   34      77.755  13.485  -15.395  1.00 31.85 S
   5 ATOM    2314  OH2 TIP S   35      79.767  43.115    5.371  1.00 35.26 S
     ATOM    2315  OH2 TIP S   37      80.173  32.998    6.198  1.00 40.03 S
     ATOM    2316  OH2 TIP S   40      85.958  19.110   24.502  1.00 24.42 S
     ATOM    2317  OH2 TIP S   42      77.719  -0.391   23.732  1.00 39.71 S
     ATOM    2318  OH2 TIP S   44      92.563  36.428   -5.574  1.00 35.43 S
  10 ATOM    2319  OH2 TIP S   45      90.942  34.092    3.570  1.00 43.64 S
     ATOM    2320  OH2 TIP S   46      74.357  32.157  -13.849  1.00 33.31 S
     ATOM    2321  OH2 TIP S   47      90.220  14.449   16.172  1.00 34.34 S
     ATOM    2322  OH2 TIP S   48      77.876  11.229  -13.863  1.00 23.53 S
     ATOM    2323  OH2 TIP S   50      76.289  12.589  -11.572  1.00 37.74 S
  15 ATOM    2324  OH2 TIP S   51      76.619   2.787   -2.969  1.00 35.95 S
     ATOM    2325  OH2 TIP S   52      65.118  19.629   24.370  1.00 34.85 S
     ATOM    2326  OH2 TIP S   53      99.690  31.473  -13.046  1.00 48.21 S
     ATOM    2327  OH2 TIP S   54      88.376  36.865    3.454  1.00 38.54 S
     ATOM    2328  OH2 TIP S   57      91.236  10.819   18.279  1.00 40.76 S
  20 ATOM    2329  OH2 TIP S   59     100.017  21.990  -14.622  1.00 41.65 S
     ATOM    2330  OH2 TIP S   63      87.188  25.521   11.438  1.00 41.53 S
     ATOM    2331  OH2 TIP S   65      90.264  19.625   12.286  1.00 24.22 S
     ATOM    2332  OH2 TIP S   66      83.805  26.254  -18.365  1.00 37.50 S
     ATOM    2333  OH2 TIP S   68      78.394   7.378    2.855  1.00 23.47 S
  25 ATOM    2334  OH2 TIP S   74      85.541  11.500  -18.436  1.00 37.35 S
     ATOM    2335  OH2 TIP S   76      98.981   8.707    2.808  1.00 34.85 S
     ATOM    2336  OH2 TIP S   78      87.802  19.118   22.522  1.00 39.99 S
     ATOM    2337  OH2 TIP S   80      92.438   3.105    2.517  1.00 37.27 S
     ATOM    2338  OH2 TIP S   81      75.580  -0.821   22.186  1.00 36.41 S
  30 ATOM    2339  OH2 TIP S   82      60.506  24.278   21.938  1.00 31.55 S
     ATOM    2340  OH2 TIP S   83      92.298  22.520  -21.183  1.00 42.32 S
     ATOM    2341  OH2 TIP S   84      74.351   4.211   -3.464  1.00 32.53 S
     ATOM    2342  OH2 TIP S   85      76.502  25.963  -21.839  1.00 41.89 S
     ATOM    2343  OH2 TIP S   86      97.965  13.142    9.216  1.00 41.73 S
  35 ATOM    2344  OH2 TIP S   87      78.657   4.418    3.361  1.00 35.63 S
     ATOM    2345  OH2 TIP S   88      93.633  28.572    3.429  1.00 34.30 S
     ATOM    2346  OH2 TIP S   89     104.691  20.306   -7.235  1.00 32.75 S
     ATOM    2347  OH2 TIP S   91      98.360  16.754  -15.558  1.00 37.92 S
     ATOM    2348  OH2 TIP S   92      88.175  32.723  -14.088  1.00 38.91 S
  40 ATOM    2349  OH2 TIP S   93      96.974  27.936  -17.613  1.00 34.47 S
     ATOM    2350  OH2 TIP S   94      85.585  22.346   15.199  1.00 41.12 S
     ATOM    2351  OH2 TIP S  100      80.948  -0.010    7.892  1.00 12.04 S
     ATOM    2352  OH2 TIP S  101      76.653  29.202   -3.527  1.00 22.10 S
     ATOM    2353  OH2 TIP S  102      74.980   8.979   -7.975  1.00 21.17 S
  45 ATOM    2354  OH2 TIP S  103      88.843  28.393    3.994  1.00 30.94 S
     ATOM    2355  OH2 TIP S  105      76.862   8.067   28.490  1.00 20.20 S
     ATOM    2356  OH2 TIP S  106      66.435  30.702    8.817  1.00 35.87 S
     ATOM    2357  OH2 TIP S  109      67.384   7.757    8.860  1.00 39.38 S
     ATOM    2358  OH2 TIP S  110      66.852   4.666   22.301  1.00 32.75 S
  50 ATOM    2359  OH2 TIP S  111      72.391   2.229   -3.501  1.00 51.07 S
     ATOM    2360  OH2 TIP S  116      80.209   7.061   -7.886  1.00 35.49 S
     ATOM    2361  OH2 TIP S  121      74.466  15.313  -12.357  1.00 45.36 S
     ATOM    2362  OH2 TIP S  122      79.225  28.627    0.179  1.00 30.68 S
     ATOM    2363  OH2 TIP S  124      59.090  22.126   22.498  1.00 35.94 S
  55 ATOM    2364  OH2 TIP S  126      73.715  24.448  -13.973  1.00 44.35 S
     ATOM    2365  OH2 TIP S  127     105.619  22.931  -11.256  1.00 43.80 S
     ATOM    2366  OH2 TIP S  128      86.658  32.319  -16.090  1.00 39.40 S
     ATOM    2367  OH2 TIP S  129      70.750  21.709  -10.875  1.00 45.74 S
     ATOM    2368  OH2 TIP S  136      77.820  12.663    6.090  1.00 47.18 S
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      ATOM   2369   OH2 TIP S 142    90.942   35.947 -13.582   1.00 48.16 S
      ATOM   2370   OH2 TIP S 146    67.351    6.830  24.075   1.00 36.66 S
      ATOM   2371   OH2 TIP S 148    98.067   12.182  -7.216   1.00 38.66 S
      ATOM   2372   OH2 TIP S 156    75.211   13.809 -20.582   1.00 45.56 S
    5 ATOM   2373   OH2 TIP S 158    72.261   20.575  12.175   1.00 51.45 S
      ATOM   2374   OH2 TIP S 166    77.289   42.685   7.086   1.00 42.23 S
      ATOM   2375   OH2 TIP S 174    65.330    6.552  20.003   1.00 42.22 S
      ATOM   2376   OH2 TIP S 176    88.027   20.872 -20.665   1.00 35.09 S
      ATOM   2377   OH2 TIP S 178    99.488   29.517 -16.497   1.00 44.21 S
   10 ATOM   2378   OH2 TIP S 182    93.851   13.830 -20.448   1.00 50.19 S
      ATOM   2379   OH2 TIP S 192    83.811   26.388   9.460   1.00 39.52 S
      ATOM   2380   OH2 TIP S 193    91.704   42.080   2.405   1.00 40.67 S
      ATOM   2381   O12 GLC G   1    82.624    0.887  12.473   1.00 47.94 G
      ATOM   2382   C11 GLC G   1    82.240    2.160  13.000   1.00 48.49 G
   15 ATOM   2383   C13 GLC G   1    83.237    3.235  12.553   1.00 46.87 G
      ATOM   2384   O14 GLC G   1    84.544    2.903  13.022   1.00 46.62 G
      ATOM   2385   C15 GLC G   1    82.817    4.591  13.117   1.00 45.80 G
      ATOM   2386   O16 GLC G   1    83.746    5.589  12.703   1.00 43.50 G
      ATOM   2387   O12 GLC G   5    86.722   -2.593   0.107   1.00 39.62 G
   20 ATOM   2388   C11 GLC G   5    86.245   -1.364  -0.429   1.00 44.37 G
      ATOM   2389   C13 GLC G   5    86.764   -0.193   0.394   1.00 44.36 G
      ATOM   2390   O14 GLC G   5    86.355   -0.326   1.761   1.00 47.64 G
      ATOM   2391   C15 GLC G   5    86.231    1.132  -0.195   1.00 45.11 G
      ATOM   2392   O16 GLC G   5    86.666    1.310  -1.557   1.00 42.61 G
   25 ATOM   2393   O12 GLC G   8    87.512    4.414  -5.278   1.00 38.37 G
      ATOM   2394   C11 GLC G   8    86.362    5.220  -5.023   1.00 34.16 G
      ATOM   2395   C13 GLC G   8    85.750    5.654  -6.351   1.00 35.54 G
      ATOM   2396   O14 GLC G   8    86.717    6.392  -7.111   1.00 37.03 G
      ATOM   2397   C15 GLC G   8    84.521    6.523  -6.082   1.00 35.46 G
   30 ATOM   2398   O16 GLC G   8    83.948    6.931  -7.319   1.00 33.79 G
      ATOM   2399   C34 STO L   1    82.178   19.404   9.614   1.00 23.98 L
      ATOM   2400   O33 STO L   1    83.091   19.645  10.691   1.00 24.40 L
      ATOM   2401   C25 STO L   1    82.557   20.621  11.610   1.00 19.84 L
      ATOM   2402   C26 STO L   1    83.748   21.455  12.055   1.00 20.55 L
   35 ATOM   2403   N31 STO L   1    84.251   22.242  10.916   1.00 22.56 L
      ATOM   2404   C32 STO L   1    83.716   23.544  10.481   1.00 20.91 L
      ATOM   2405   C27 STO L   1    84.847   20.523  12.559   1.00 19.37 L
      ATOM   2406   C28 STO L   1    84.278   19.595  13.658   1.00 18.70 L
      ATOM   2407   O29 STO L   1    82.889   19.845  13.980   1.00 20.08 L
   40 ATOM   2408   C24 STO L   1    81.939   19.930  12.872   1.00 21.85 L
      ATOM   2409   C35 STO L   1    80.791   20.824  13.403   1.00 20.12 L
      ATOM   2410   N6  STO L   1    81.456   18.689  12.528   1.00 19.30 L
      ATOM   2411   C5  STO L   1    80.172   18.450  12.023   1.00 18.50 L
      ATOM   2412   C4  STO L   1    79.039   19.219  11.690   1.00 14.17 L
   45 ATOM   2413   C3  STO L   1    77.901   18.569  11.148   1.00 14.32 L
      ATOM   2414   C2  STO L   1    77.899   17.158  10.946   1.00 14.05 L
      ATOM   2415   C1  STO L   1    79.035   16.386  11.282   1.00 13.54 L
      ATOM   2416   C23 STO L   1    80.154   17.053  11.812   1.00 16.42 L
      ATOM   2417   C22 STO L   1    81.361   16.522  12.164   1.00 17.74 L
   50 ATOM   2418   C7  STO L   1    82.162   17.525  12.606   1.00 18.84 L
      ATOM   2419   C8  STO L   1    83.501   17.279  12.972   1.00 18.68 L
      ATOM   2420   N9  STO L   1    84.462   18.150  13.376   1.00 19.59 L
      ATOM   2421   C10 STO L   1    85.663   17.477  13.561   1.00 19.11 L
      ATOM   2422   C11 STO L   1    86.968   17.838  13.942   1.00 16.81 L
   55 ATOM   2423   C12 STO L   1    87.961   16.831  14.007   1.00 20.66 L
      ATOM   2424   C13 STO L   1    87.645   15.476  13.689   1.00 20.30 L
      ATOM   2425   C14 STO L   1    86.329   15.117  13.306   1.00 19.66 L
      ATOM   2426   C15 STO L   1    85.364   16.127  13.248   1.00 18.74 L
      ATOM   2427   C16 STO L   1    84.049   16.022  12.899   1.00 19.21 L
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	ATOM	2428	C17	STO	L	1	83.217	14.936	12.440	1.00	18.26	L
	ATOM	2429	C21	STO	L	1	81.934	15.217	12.098	1.00	17.21	L
	ATOM	2430	C20	STO	L	1	81.325	14.098	11.689	1.00	17.68	L
	ATOM	2431	N19	STO	L	1	82.281	13.080	11.786	1.00	13.64	L
5	ATOM	2432	C18	STO	L	1	83.457	13.603	12.261	1.00	16.89	L
	ATOM	2433	O30	STO	L	1	84.493	12.981	12.504	1.00	15.41	L
	ATOM	2434	S	SO4	I	1	64.914	7.877	16.247	1.00	82.11	I
	ATOM	2435	O1	SO4	I	1	63.624	8.415	15.778	1.00	82.68	I
	ATOM	2436	O2	SO4	I	1	65.841	8.992	16.520	1.00	82.73	I
10	ATOM	2437	O3	SO4	I	1	65.479	7.010	15.198	1.00	83.33	I
	ATOM	2438	O4	SO4	I	1	64.709	7.088	17.477	1.00	82.04	I
	ATOM	2439	S	SO4	I	2	68.379	-7.029	19.810	1.00	112.82	I
	ATOM	2440	O1	SO4	I	2	66.992	-6.526	19.786	1.00	112.60	I
15	ATOM	2441	O2	SO4	I	2	68.850	-7.226	18.425	1.00	112.21	I
	ATOM	2442	O3	SO4	I	2	68.426	-8.312	20.538	1.00	112.24	I
	ATOM	2443	O4	SO4	I	2	69.249	-6.051	20.491	1.00	112.72	I
	ATOM	2444	S	SO4	I	3	84.927	-1.874	12.302	1.00	79.99	I
	ATOM	2445	O1	SO4	I	3	84.408	-1.334	13.568	1.00	79.70	I
20	ATOM	2446	O2	SO4	I	3	84.442	-1.050	11.178	1.00	80.43	I
	ATOM	2447	O3	SO4	I	3	84.453	-3.263	12.131	1.00	79.92	I
	ATOM	2448	O4	SO4	I	3	86.402	-1.845	12.326	1.00	80.52	I
	ATOM	2449	S	SO4	I	4	80.577	9.632	30.033	1.00	98.23	I
	ATOM	2450	O1	SO4	I	4	79.725	9.060	28.972	1.00	96.88	I
25	ATOM	2451	O2	SO4	I	4	82.000	9.461	29.683	1.00	97.80	I
	ATOM	2452	O3	SO4	I	4	80.304	8.944	31.309	1.00	98.08	I
	ATOM	2453	O4	SO4	I	4	80.281	11.069	30.178	1.00	98.08	I
	ATOM	2454	S	SO4	I	5	89.310	6.131	25.915	1.00	110.86	I
	ATOM	2455	O1	SO4	I	5	89.025	6.456	27.331	1.00	110.48	I
30	ATOM	2456	O2	SO4	I	5	88.042	6.095	25.151	1.00	110.12	I
	ATOM	2457	O3	SO4	I	5	89.970	4.810	25.844	1.00	110.72	I
	ATOM	2458	O4	SO4	I	5	90.205	7.155	25.330	1.00	110.02	I
	ATOM	2459	O2	PO4	P	100	64.527	26.252	2.299	1.00	88.98	P
	ATOM	2460	O3	PO4	P	100	66.482	25.155	1.367	1.00	88.39	P
35	ATOM	2461	O4	PO4	P	100	66.688	26.504	3.376	1.00	87.87	P
	ATOM	2462	O1	PO4	P	100	66.264	27.565	1.240	1.00	88.80	P
	ATOM	2463	P	PO4	P	100	65.992	26.368	2.070	1.00	88.61	P
	ATOM	2464	CB	LEU	145		73.932	8.398	8.961	0.50	21.29	AC2
	ATOM	2465	CG	LEU	145		72.901	8.606	10.076	0.50	21.65	AC2
	ATOM	2466	CD1	LEU	145		71.904	9.671	9.655	0.50	21.60	AC2
40	ATOM	2467	CD2	LEU	145		72.195	7.298	10.388	0.50	19.61	AC2
	ATOM	2468	CB	ASN	214		88.968	8.625	7.173	0.50	22.34	AC2
	ATOM	2469	CG	ASN	214		89.705	8.084	5.975	0.50	22.01	AC2
	ATOM	2470	OD1	ASN	214		89.240	7.153	5.320	0.50	22.69	AC2
	ATOM	2471	ND2	ASN	214		90.859	8.660	5.678	0.50	22.69	AC2
45	ATOM	2472	CB	ASP	216		93.187	5.546	5.379	0.50	25.98	AC2
	ATOM	2473	CG	ASP	216		91.789	5.828	4.895	0.50	27.09	AC2
	ATOM	2474	OD1	ASP	216		91.587	6.896	4.290	0.50	28.49	AC2
	ATOM	2475	OD2	ASP	216		90.896	4.982	5.110	0.50	28.20	AC2
	END											

Example 8: Co-ordinates for PDK1 fragment co-crystallised with UCN-01

```
     REMARK coordinates from restrained individual B-factor refinement
     REMARK refinement resolution: 25.0 - 2.50 A
 5   REMARK starting r= 0.1919 free_r= 0.2582
     REMARK final     r= 0.1894 free_r= 0.2567
     REMARK B rmsd for bonded mainchain atoms=  1.412  target= 1.5
     REMARK B rmsd for bonded sidechain atoms=  2.205  target= 2.0
     REMARK B rmsd for angle mainchain atoms=  2.401  target= 2.0
10   REMARK B rmsd for angle sidechain atoms=  3.256  target= 2.5
     REMARK rweight=  0.1000 (with wa= 3.1611)
     REMARK target= mlf  steps= 30
     REMARK sg= P3(2)21 a= 123.387 b= 123.387 c= 47.115 alpha= 90 beta=
     90 gamma= 120
15   REMARK parameter file 1  : /dd1/david/refinement/MY_CNS/prot.par
     REMARK parameter file 2  : /dd1/david/refinement/MY_CNS/ucn01.par
     REMARK parameter file 3  : CNS_TOPPAR:water_rep.param
     REMARK parameter file 4  : CNS_TOPPAR:ion.param
     REMARK parameter file 5  :
20   /dd1/david/refinement/MY_CNS/glycerol.par
     REMARK molecular structure file: ../generate/generate.mtf
     REMARK input coordinates: ../minimize/minimize.pdb
     REMARK reflection file= ../../../data/cns.hkl
     REMARK ncs= none
25   REMARK B-correction resolution: 6.0 - 2.50
     REMARK initial B-factor correction applied to fobs :
     REMARK   B11=  -4.722 B22=  -4.722 B33=   9.444
     REMARK   B12=  -3.572 B13=   0.000 B23=   0.000
     REMARK B-factor correction applied to coordinate array B:   -0.193
30   REMARK  bulk  solvent:  density  level=  0.3837  e/A^3,  B-factor=
     40.9071 A^2
     REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
     REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
     REMARK theoretical total number of refl. in resol. range:  14485 (
35   100.0 % )
     REMARK  number  of  unobserved  reflections  (no  entry  or  |F|=0):
     101 (   0.7 % )
     REMARK number of reflections rejected:         0 (   0.0 % )
     REMARK total number of reflections used:      14384 (  99.3 % )
40   REMARK number of reflections in working set: 13795 (  95.2 % )
     REMARK number of reflections in test set:      589 (   4.1 % )
     CRYST1 123.387  123.387   47.115  90.00  90.00 120.00 P 32 2 1
     REMARK FILENAME="bindividual.pdb"
     REMARK DATE:25-Mar-2003  17:21:21      created by user: david
45   REMARK VERSION:1.0
     ATOM      1  CB  ALA A  73      67.051  -3.293  12.591  1.00 59.77 A
     ATOM      2  C   ALA A  73      67.941  -4.753  14.416  1.00 61.14 A
     ATOM      3  O   ALA A  73      67.184  -5.270  15.240  1.00 61.61 A
     ATOM      4  N   ALA A  73      66.523  -5.729  12.643  1.00 58.89 A
50   ATOM      5  CA  ALA A  73      67.564  -4.697  12.943  1.00 60.69 A
     ATOM      6  N   PRO A  74      69.130  -4.241  14.770  1.00 61.63 A
     ATOM      7  CD  PRO A  74      70.264  -3.830  13.918  1.00 61.72 A
     ATOM      8  CA  PRO A  74      69.514  -4.278  16.187  1.00 61.34 A
     ATOM      9  CB  PRO A  74      70.918  -3.663  16.181  1.00 61.79 A
55   ATOM     10  CG  PRO A  74      71.458  -4.072  14.818  1.00 61.47 A
     ATOM     11  C   PRO A  74      68.523  -3.481  17.047  1.00 60.16 A
     ATOM     12  O   PRO A  74      67.625  -2.817  16.519  1.00 60.77 A
```

	ATOM	13	N	ALA A	75	68.680	-3.562	18.368	1.00 58.13 A
	ATOM	14	CA	ALA A	75	67.815	-2.828	19.292	1.00 54.74 A
	ATOM	15	CB	ALA A	75	68.048	-3.309	20.731	1.00 54.90 A
	ATOM	16	C	ALA A	75	68.175	-1.349	19.177	1.00 51.85 A
5	ATOM	17	O	ALA A	75	69.313	-1.005	18.851	1.00 52.46 A
	ATOM	18	N	LYS A	76	67.215	-0.473	19.427	1.00 46.96 A
	ATOM	19	CA	LYS A	76	67.507	0.947	19.354	1.00 43.72 A
	ATOM	20	CB	LYS A	76	66.270	1.756	19.744	1.00 42.81 A
	ATOM	21	CG	LYS A	76	66.177	3.116	19.087	1.00 41.81 A
10	ATOM	22	CD	LYS A	76	65.926	2.983	17.590	1.00 40.56 A
	ATOM	23	CE	LYS A	76	65.691	4.343	16.943	1.00 42.58 A
	ATOM	24	NZ	LYS A	76	65.362	4.231	15.495	1.00 42.73 A
	ATOM	25	C	LYS A	76	68.639	1.218	20.351	1.00 41.25 A
	ATOM	26	O	LYS A	76	68.599	0.741	21.488	1.00 41.68 A
15	ATOM	27	N	LYS A	77	69.655	1.960	19.936	1.00 37.68 A
	ATOM	28	CA	LYS A	77	70.748	2.255	20.849	1.00 35.10 A
	ATOM	29	CB	LYS A	77	72.016	2.619	20.074	1.00 34.13 A
	ATOM	30	CG	LYS A	77	72.427	1.570	19.053	1.00 32.68 A
	ATOM	31	CD	LYS A	77	73.927	1.537	18.858	1.00 33.90 A
20	ATOM	32	CE	LYS A	77	74.366	0.471	17.889	1.00 31.40 A
	ATOM	33	NZ	LYS A	77	73.796	-0.863	18.164	1.00 34.76 A
	ATOM	34	C	LYS A	77	70.313	3.408	21.743	1.00 34.79 A
	ATOM	35	O	LYS A	77	69.319	4.077	21.458	1.00 34.20 A
	ATOM	36	N	ARG A	78	71.023	3.626	22.845	1.00 34.88 A
25	ATOM	37	CA	ARG A	78	70.687	4.723	23.759	1.00 34.62 A
	ATOM	38	CB	ARG A	78	69.694	4.247	24.839	1.00 38.43 A
	ATOM	39	CG	ARG A	78	70.027	2.884	25.353	1.00 42.71 A
	ATOM	40	CD	ARG A	78	69.355	2.424	26.625	1.00 48.52 A
	ATOM	41	NE	ARG A	78	70.365	1.702	27.412	1.00 56.10 A
30	ATOM	42	CZ	ARG A	78	70.428	0.355	27.518	1.00 57.88 A
	ATOM	43	NH1	ARG A	78	69.519	-0.397	26.838	1.00 58.45 A
	ATOM	44	NH2	ARG A	78	71.335	-0.195	28.369	1.00 59.23 A
	ATOM	45	C	ARG A	78	71.967	5.330	24.382	1.00 32.26 A
	ATOM	46	O	ARG A	78	73.066	4.777	24.278	1.00 31.42 A
35	ATOM	47	N	PRO A	79	71.844	6.509	24.997	1.00 30.46 A
	ATOM	48	CD	PRO A	79	70.616	7.284	25.232	1.00 28.96 A
	ATOM	49	CA	PRO A	79	72.997	7.172	25.609	1.00 30.38 A
	ATOM	50	CB	PRO A	79	72.350	8.303	26.405	1.00 28.86 A
	ATOM	51	CG	PRO A	79	71.169	8.642	25.568	1.00 27.83 A
40	ATOM	52	C	PRO A	79	73.889	6.287	26.468	1.00 29.47 A
	ATOM	53	O	PRO A	79	75.108	6.377	26.391	1.00 29.57 A
	ATOM	54	N	GLU A	80	73.268	5.435	27.279	1.00 29.77 A
	ATOM	55	CA	GLU A	80	73.975	4.533	28.179	1.00 29.55 A
	ATOM	56	CB	GLU A	80	72.980	3.768	29.043	1.00 32.88 A
45	ATOM	57	CG	GLU A	80	71.996	4.643	29.798	1.00 40.36 A
	ATOM	58	CD	GLU A	80	71.014	5.367	28.879	1.00 44.21 A
	ATOM	59	OE1	GLU A	80	70.422	4.700	28.000	1.00 46.94 A
	ATOM	60	OE2	GLU A	80	70.828	6.598	29.038	1.00 45.47 A
	ATOM	61	C	GLU A	80	74.872	3.524	27.479	1.00 28.32 A
50	ATOM	62	O	GLU A	80	75.709	2.894	28.126	1.00 28.20 A
	ATOM	63	N	ASP A	81	74.698	3.342	26.168	1.00 26.28 A
	ATOM	64	CA	ASP A	81	75.528	2.384	25.441	1.00 23.59 A
	ATOM	65	CB	ASP A	81	74.834	1.888	24.184	1.00 25.88 A
	ATOM	66	CG	ASP A	81	73.510	1.225	24.477	1.00 28.14 A
55	ATOM	67	OD1	ASP A	81	73.369	0.625	25.578	1.00 29.12 A
	ATOM	68	OD2	ASP A	81	72.617	1.294	23.601	1.00 28.33 A
	ATOM	69	C	ASP A	81	76.856	2.967	25.046	1.00 23.24 A
	ATOM	70	O	ASP A	81	77.716	2.257	24.519	1.00 24.29 A
	ATOM	71	N	PHE A	82	77.036	4.259	25.309	1.00 21.34 A

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       ATOM     72   CA   PHE A  82      78.272    4.930   24.946  1.00 20.86 A
       ATOM     73   CB   PHE A  82      77.992    6.029   23.929  1.00 18.34 A
       ATOM     74   CG   PHE A  82      77.355    5.536   22.683  1.00 19.18 A
       ATOM     75   CD1  PHE A  82      78.138    5.099   21.610  1.00 19.28 A
  5    ATOM     76   CD2  PHE A  82      75.974    5.462   22.588  1.00 17.82 A
       ATOM     77   CE1  PHE A  82      77.551    4.597   20.461  1.00 17.94 A
       ATOM     78   CE2  PHE A  82      75.371    4.961   21.449  1.00 19.08 A
       ATOM     79   CZ   PHE A  82      76.164    4.525   20.376  1.00 20.45 A
       ATOM     80   C    PHE A  82      78.982    5.555   26.105  1.00 21.71 A
 10    ATOM     81   O    PHE A  82      78.418    5.739   27.173  1.00 24.82 A
       ATOM     82   N    LYS A  83      80.244    5.865   25.869  1.00 21.83 A
       ATOM     83   CA   LYS A  83      81.077    6.555   26.823  1.00 22.27 A
       ATOM     84   CB   LYS A  83      82.327    5.750   27.148  1.00 24.03 A
       ATOM     85   CG   LYS A  83      83.074    6.320   28.340  1.00 30.99 A
 15    ATOM     86   CD   LYS A  83      84.465    6.827   27.993  1.00 35.16 A
       ATOM     87   CE   LYS A  83      85.465    5.683   27.945  1.00 39.06 A
       ATOM     88   NZ   LYS A  83      85.512    4.974   29.266  1.00 41.00 A
       ATOM     89   C    LYS A  83      81.462    7.775   25.998  1.00 22.51 A
       ATOM     90   O    LYS A  83      82.324    7.677   25.120  1.00 23.24 A
 20    ATOM     91   N    PHE A  84      80.800    8.907   26.227  1.00 20.27 A
       ATOM     92   CA   PHE A  84      81.118   10.098   25.454  1.00 19.31 A
       ATOM     93   CB   PHE A  84      80.016   11.145   25.605  1.00 19.95 A
       ATOM     94   CG   PHE A  84      78.683   10.694   25.075  1.00 20.81 A
       ATOM     95   CD1  PHE A  84      77.855    9.879   25.835  1.00 21.62 A
 25    ATOM     96   CD2  PHE A  84      78.278   11.035   23.804  1.00 20.47 A
       ATOM     97   CE1  PHE A  84      76.665    9.418   25.339  1.00 19.26 A
       ATOM     98   CE2  PHE A  84      77.073   10.568   23.300  1.00 18.97 A
       ATOM     99   CZ   PHE A  84      76.276    9.764   24.068  1.00 19.78 A
       ATOM    100   C    PHE A  84      82.463   10.680   25.863  1.00 19.58 A
 30    ATOM    101   O    PHE A  84      82.888   10.540   26.998  1.00 20.60 A
       ATOM    102   N    GLY A  85      83.141   11.307   24.913  1.00 19.33 A
       ATOM    103   CA   GLY A  85      84.434   11.909   25.169  1.00 18.23 A
       ATOM    104   C    GLY A  85      84.480   13.368   24.743  1.00 19.96 A
       ATOM    105   O    GLY A  85      83.533   14.124   24.962  1.00 20.02 A
 35    ATOM    106   N    LYS A  86      85.568   13.764   24.101  1.00 20.79 A
       ATOM    107   CA   LYS A  86      85.736   15.159   23.704  1.00 22.45 A
       ATOM    108   CB   LYS A  86      87.168   15.400   23.210  1.00 22.06 A
       ATOM    109   CG   LYS A  86      87.399   15.048   21.751  1.00 23.37 A
       ATOM    110   CD   LYS A  86      88.832   14.591   21.505  1.00 26.45 A
 40    ATOM    111   CE   LYS A  86      89.451   15.275   20.294  1.00 30.25 A
       ATOM    112   NZ   LYS A  86      89.771   16.721   20.553  1.00 33.08 A
       ATOM    113   C    LYS A  86      84.750   15.668   22.661  1.00 21.50 A
       ATOM    114   O    LYS A  86      84.154   14.900   21.916  1.00 21.98 A
       ATOM    115   N    ILE A  87      84.582   16.985   22.647  1.00 20.15 A
 45    ATOM    116   CA   ILE A  87      83.712   17.661   21.705  1.00 19.38 A
       ATOM    117   CB   ILE A  87      83.270   19.037   22.272  1.00 17.37 A
       ATOM    118   CG2  ILE A  87      82.724   19.935   21.163  1.00 15.07 A
       ATOM    119   CG1  ILE A  87      82.222   18.800   23.371  1.00 18.62 A
       ATOM    120   CD1  ILE A  87      81.848   20.025   24.190  1.00 16.91 A
 50    ATOM    121   C    ILE A  87      84.549   17.836   20.436  1.00 19.85 A
       ATOM    122   O    ILE A  87      85.666   18.317   20.502  1.00 21.66 A
       ATOM    123   N    LEU A  88      84.030   17.406   19.293  1.00 19.65 A
       ATOM    124   CA   LEU A  88      84.771   17.539   18.047  1.00 20.28 A
       ATOM    125   CB   LEU A  88      84.423   16.405   17.078  1.00 18.76 A
 55    ATOM    126   CG   LEU A  88      84.807   14.981   17.493  1.00 16.99 A
       ATOM    127   CD1  LEU A  88      84.122   13.995   16.570  1.00 13.92 A
       ATOM    128   CD2  LEU A  88      86.305   14.809   17.441  1.00 11.51 A
       ATOM    129   C    LEU A  88      84.429   18.861   17.407  1.00 20.87 A
       ATOM    130   O    LEU A  88      85.233   19.443   16.709  1.00 21.48 A
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	ATOM	131	N	GLY A	89	83.221	19.339	17.639	1.00	22.34	A
	ATOM	132	CA	GLY A	89	82.856	20.601	17.043	1.00	25.87	A
	ATOM	133	C	GLY A	89	81.476	21.057	17.451	1.00	29.45	A
	ATOM	134	O	GLY A	89	80.673	20.292	17.990	1.00	29.48	A
5	ATOM	135	N	GLU A	90	81.196	22.321	17.188	1.00	32.71	A
	ATOM	136	CA	GLU A	90	79.904	22.864	17.530	1.00	37.61	A
	ATOM	137	CB	GLU A	90	80.047	23.798	18.738	1.00	38.05	A
	ATOM	138	CG	GLU A	90	80.123	22.998	20.037	1.00	42.04	A
	ATOM	139	CD	GLU A	90	80.463	23.813	21.270	1.00	45.47	A
10	ATOM	140	OE1	GLU A	90	81.662	24.137	21.477	1.00	47.26	A
	ATOM	141	OE2	GLU A	90	79.524	24.119	22.041	1.00	47.39	A
	ATOM	142	C	GLU A	90	79.277	23.565	16.349	1.00	40.01	A
	ATOM	143	O	GLU A	90	79.972	24.148	15.518	1.00	42.05	A
	ATOM	144	N	GLY A	91	77.962	23.440	16.240	1.00	42.05	A
15	ATOM	145	CA	GLY A	91	77.238	24.102	15.174	1.00	43.15	A
	ATOM	146	C	GLY A	91	76.276	25.035	15.892	1.00	45.06	A
	ATOM	147	O	GLY A	91	76.317	25.149	17.134	1.00	43.58	A
	ATOM	148	N	SER A	92	75.408	25.699	15.136	1.00	46.66	A
	ATOM	149	CA	SER A	92	74.430	26.606	15.742	1.00	48.21	A
20	ATOM	150	CB	SER A	92	73.754	27.462	14.660	1.00	51.13	A
	ATOM	151	OG	SER A	92	73.601	26.741	13.439	1.00	54.79	A
	ATOM	152	C	SER A	92	73.382	25.827	16.538	1.00	47.10	A
	ATOM	153	O	SER A	92	73.055	26.190	17.678	1.00	49.44	A
	ATOM	154	N	PHE A	93	72.874	24.743	15.957	1.00	44.39	A
25	ATOM	155	CA	PHE A	93	71.866	23.942	16.648	1.00	41.99	A
	ATOM	156	CB	PHE A	93	70.617	23.798	15.780	1.00	43.92	A
	ATOM	157	CG	PHE A	93	70.434	24.919	14.814	1.00	47.66	A
	ATOM	158	CD1	PHE A	93	70.689	24.729	13.455	1.00	49.35	A
	ATOM	159	CD2	PHE A	93	70.061	26.185	15.264	1.00	49.16	A
30	ATOM	160	CE1	PHE A	93	70.581	25.789	12.551	1.00	51.11	A
	ATOM	161	CE2	PHE A	93	69.949	27.257	14.374	1.00	50.58	A
	ATOM	162	CZ	PHE A	93	70.209	27.062	13.014	1.00	51.37	A
	ATOM	163	C	PHE A	93	72.352	22.555	17.028	1.00	38.35	A
	ATOM	164	O	PHE A	93	71.532	21.670	17.257	1.00	38.33	A
35	ATOM	165	N	SER A	94	73.665	22.351	17.106	1.00	33.28	A
	ATOM	166	CA	SER A	94	74.151	21.028	17.440	1.00	29.57	A
	ATOM	167	CB	SER A	94	73.996	20.106	16.227	1.00	30.45	A
	ATOM	168	OG	SER A	94	75.123	20.190	15.368	1.00	30.51	A
	ATOM	169	C	SER A	94	75.588	20.952	17.936	1.00	27.66	A
40	ATOM	170	O	SER A	94	76.369	21.893	17.803	1.00	27.25	A
	ATOM	171	N	THR A	95	75.927	19.807	18.512	1.00	25.06	A
	ATOM	172	CA	THR A	95	77.264	19.572	19.027	1.00	23.70	A
	ATOM	173	CB	THR A	95	77.310	19.626	20.582	1.00	24.12	A
	ATOM	174	OG1	THR A	95	76.801	20.886	21.044	1.00	25.68	A
45	ATOM	175	CG2	THR A	95	78.731	19.458	21.073	1.00	22.92	A
	ATOM	176	C	THR A	95	77.655	18.180	18.594	1.00	22.05	A
	ATOM	177	O	THR A	95	76.860	17.250	18.673	1.00	21.43	A
	ATOM	178	N	VAL A	96	78.883	18.029	18.129	1.00	21.52	A
	ATOM	179	CA	VAL A	96	79.348	16.723	17.702	1.00	19.53	A
50	ATOM	180	CB	VAL A	96	79.980	16.818	16.316	1.00	19.24	A
	ATOM	181	CG1	VAL A	96	80.418	15.443	15.839	1.00	17.73	A
	ATOM	182	CG2	VAL A	96	78.983	17.442	15.353	1.00	18.03	A
	ATOM	183	C	VAL A	96	80.364	16.242	18.722	1.00	19.48	A
	ATOM	184	O	VAL A	96	81.372	16.910	18.959	1.00	19.84	A
55	ATOM	185	N	VAL A	97	80.099	15.082	19.324	1.00	17.32	A
	ATOM	186	CA	VAL A	97	80.989	14.532	20.341	1.00	17.32	A
	ATOM	187	CB	VAL A	97	80.283	14.438	21.736	1.00	18.35	A
	ATOM	188	CG1	VAL A	97	79.581	15.750	22.066	1.00	20.10	A
	ATOM	189	CG2	VAL A	97	79.234	13.357	21.713	1.00	23.78	A

	ATOM	190	C	VAL A	97	81.471	13.144	19.949	1.00 17.15 A
	ATOM	191	O	VAL A	97	80.727	12.351	19.379	1.00 18.17 A
	ATOM	192	N	LEU A	98	82.735	12.866	20.243	1.00 17.34 A
	ATOM	193	CA	LEU A	98	83.331	11.575	19.974	1.00 17.44 A
5	ATOM	194	CB	LEU A	98	84.853	11.689	19.990	1.00 17.84 A
	ATOM	195	CG	LEU A	98	85.656	10.407	19.737	1.00 18.59 A
	ATOM	196	CD1	LEU A	98	85.259	9.803	18.387	1.00 18.87 A
	ATOM	197	CD2	LEU A	98	87.151	10.738	19.772	1.00 16.62 A
	ATOM	198	C	LEU A	98	82.874	10.626	21.081	1.00 18.35 A
10	ATOM	199	O	LEU A	98	82.992	10.926	22.259	1.00 18.60 A
	ATOM	200	N	ALA A	99	82.340	9.476	20.697	1.00 19.15 A
	ATOM	201	CA	ALA A	99	81.888	8.513	21.675	1.00 19.73 A
	ATOM	202	CB	ALA A	99	80.383	8.534	21.759	1.00 17.97 A
	ATOM	203	C	ALA A	99	82.360	7.117	21.317	1.00 21.86 A
15	ATOM	204	O	ALA A	99	82.502	6.766	20.131	1.00 22.18 A
	ATOM	205	N	ARG A	100	82.631	6.324	22.345	1.00 21.93 A
	ATOM	206	CA	ARG A	100	83.025	4.963	22.102	1.00 23.29 A
	ATOM	207	CB	ARG A	100	84.333	4.637	22.805	1.00 25.99 A
	ATOM	208	CG	ARG A	100	84.870	3.271	22.388	1.00 31.56 A
20	ATOM	209	CD	ARG A	100	86.146	2.923	23.129	1.00 35.19 A
	ATOM	210	NE	ARG A	100	87.220	3.875	22.847	1.00 37.39 A
	ATOM	211	CZ	ARG A	100	87.958	3.870	21.740	1.00 38.05 A
	ATOM	212	NH1	ARG A	100	87.742	2.953	20.797	1.00 37.25 A
	ATOM	213	NH2	ARG A	100	88.918	4.780	21.580	1.00 36.22 A
25	ATOM	214	C	ARG A	100	81.904	4.060	22.603	1.00 22.07 A
	ATOM	215	O	ARG A	100	81.460	4.177	23.743	1.00 22.10 A
	ATOM	216	N	GLU A	101	81.417	3.189	21.734	1.00 21.29 A
	ATOM	217	CA	GLU A	101	80.357	2.262	22.119	1.00 22.87 A
	ATOM	218	CB	GLU A	101	79.747	1.631	20.867	1.00 23.10 A
30	ATOM	219	CG	GLU A	101	78.740	0.563	21.148	1.00 22.71 A
	ATOM	220	CD	GLU A	101	78.128	0.040	19.878	1.00 23.56 A
	ATOM	221	OE1	GLU A	101	78.892	-0.198	18.922	1.00 21.84 A
	ATOM	222	OE2	GLU A	101	76.890	-0.143	19.832	1.00 26.29 A
	ATOM	223	C	GLU A	101	80.942	1.176	23.037	1.00 21.56 A
35	ATOM	224	O	GLU A	101	81.884	0.485	22.666	1.00 20.69 A
	ATOM	225	N	LEU A	102	80.389	1.042	24.236	1.00 21.11 A
	ATOM	226	CA	LEU A	102	80.874	0.057	25.204	1.00 21.54 A
	ATOM	227	CB	LEU A	102	80.075	0.199	26.507	1.00 20.90 A
	ATOM	228	CG	LEU A	102	80.193	1.620	27.092	1.00 22.35 A
40	ATOM	229	CD1	LEU A	102	79.177	1.798	28.207	1.00 20.18 A
	ATOM	230	CD2	LEU A	102	81.600	1.866	27.608	1.00 17.47 A
	ATOM	231	C	LEU A	102	80.896	-1.415	24.729	1.00 20.27 A
	ATOM	232	O	LEU A	102	81.922	-2.078	24.825	1.00 21.63 A
	ATOM	233	N	ALA A	103	79.792	-1.922	24.201	1.00 18.37 A
45	ATOM	234	CA	ALA A	103	79.757	-3.307	23.731	1.00 20.54 A
	ATOM	235	CB	ALA A	103	78.333	-3.694	23.359	1.00 19.31 A
	ATOM	236	C	ALA A	103	80.688	-3.658	22.552	1.00 22.26 A
	ATOM	237	O	ALA A	103	81.002	-4.829	22.358	1.00 23.93 A
	ATOM	238	N	THR A	104	81.141	-2.677	21.775	1.00 20.79 A
50	ATOM	239	CA	THR A	104	81.972	-2.999	20.622	1.00 21.40 A
	ATOM	240	CB	THR A	104	81.279	-2.632	19.326	1.00 20.97 A
	ATOM	241	OG1	THR A	104	81.174	-1.205	19.259	1.00 23.21 A
	ATOM	242	CG2	THR A	104	79.891	-3.266	19.245	1.00 19.82 A
	ATOM	243	C	THR A	104	83.304	-2.300	20.569	1.00 23.57 A
55	ATOM	244	O	THR A	104	84.168	-2.687	19.796	1.00 23.41 A
	ATOM	245	N	SER A	105	83.454	-1.243	21.359	1.00 24.64 A
	ATOM	246	CA	SER A	105	84.687	-0.487	21.390	1.00 24.23 A
	ATOM	247	CB	SER A	105	85.855	-1.467	21.481	1.00 25.40 A
	ATOM	248	OG	SER A	105	87.074	-0.788	21.719	1.00 34.15 A

	ATOM	249	C	SER A 105	84.819	0.454	20.163	1.00	23.42	A
	ATOM	250	O	SER A 105	85.803	1.187	20.013	1.00	23.28	A
	ATOM	251	N	ARG A 106	83.821	0.448	19.295	1.00	21.19	A
	ATOM	252	CA	ARG A 106	83.850	1.323	18.115	1.00	22.25	A
5	ATOM	253	CB	ARG A 106	82.754	0.922	17.118	1.00	24.82	A
	ATOM	254	CG	ARG A 106	83.027	-0.343	16.349	1.00	25.20	A
	ATOM	255	CD	ARG A 106	81.740	-0.942	15.884	1.00	25.19	A
	ATOM	256	NE	ARG A 106	81.972	-1.900	14.815	1.00	26.11	A
	ATOM	257	CZ	ARG A 106	81.042	-2.707	14.322	1.00	24.24	A
10	ATOM	258	NH1	ARG A 106	79.805	-2.677	14.818	1.00	21.06	A
	ATOM	259	NH2	ARG A 106	81.351	-3.513	13.315	1.00	20.25	A
	ATOM	260	C	ARG A 106	83.655	2.806	18.433	1.00	19.79	A
	ATOM	261	O	ARG A 106	82.836	3.175	19.266	1.00	18.73	A
15	ATOM	262	N	GLU A 107	84.404	3.646	17.736	1.00	19.82	A
	ATOM	263	CA	GLU A 107	84.294	5.086	17.903	1.00	21.14	A
	ATOM	264	CB	GLU A 107	85.656	5.746	17.777	1.00	21.88	A
	ATOM	265	CG	GLU A 107	86.562	5.428	18.926	1.00	26.09	A
	ATOM	266	CD	GLU A 107	87.916	6.043	18.746	1.00	30.29	A
	ATOM	267	OE1	GLU A 107	88.212	7.057	19.434	1.00	32.48	A
20	ATOM	268	OE2	GLU A 107	88.678	5.512	17.901	1.00	31.98	A
	ATOM	269	C	GLU A 107	83.358	5.693	16.870	1.00	20.50	A
	ATOM	270	O	GLU A 107	83.474	5.429	15.676	1.00	20.70	A
	ATOM	271	N	TYR A 108	82.415	6.498	17.347	1.00	20.38	A
25	ATOM	272	CA	TYR A 108	81.464	7.172	16.477	1.00	18.49	A
	ATOM	273	CB	TYR A 108	80.049	6.660	16.700	1.00	17.92	A
	ATOM	274	CG	TYR A 108	79.828	5.247	16.238	1.00	23.37	A
	ATOM	275	CD1	TYR A 108	79.598	4.964	14.886	1.00	22.79	A
	ATOM	276	CE1	TYR A 108	79.357	3.648	14.458	1.00	23.56	A
	ATOM	277	CD2	TYR A 108	79.820	4.180	17.154	1.00	21.34	A
30	ATOM	278	CE2	TYR A 108	79.583	2.873	16.740	1.00	20.43	A
	ATOM	279	CZ	TYR A 108	79.346	2.609	15.392	1.00	23.44	A
	ATOM	280	OH	TYR A 108	79.061	1.321	14.972	1.00	24.10	A
	ATOM	281	C	TYR A 108	81.478	8.635	16.828	1.00	18.53	A
	ATOM	282	O	TYR A 108	81.778	9.011	17.971	1.00	17.37	A
35	ATOM	283	N	ALA A 109	81.169	9.453	15.829	1.00	17.24	A
	ATOM	284	CA	ALA A 109	81.053	10.885	16.006	1.00	15.98	A
	ATOM	285	CB	ALA A 109	81.597	11.600	14.788	1.00	15.20	A
	ATOM	286	C	ALA A 109	79.528	11.087	16.140	1.00	15.73	A
	ATOM	287	O	ALA A 109	78.767	10.873	15.191	1.00	15.79	A
40	ATOM	288	N	ILE A 110	79.070	11.474	17.320	1.00	14.95	A
	ATOM	289	CA	ILE A 110	77.636	11.636	17.511	1.00	15.99	A
	ATOM	290	CB	ILE A 110	77.188	10.940	18.815	1.00	15.51	A
	ATOM	291	CG2	ILE A 110	75.697	11.126	19.039	1.00	14.44	A
	ATOM	292	CG1	ILE A 110	77.541	9.452	18.729	1.00	16.63	A
45	ATOM	293	CD1	ILE A 110	76.964	8.595	19.847	1.00	16.83	A
	ATOM	294	C	ILE A 110	77.176	13.085	17.514	1.00	16.55	A
	ATOM	295	O	ILE A 110	77.583	13.873	18.370	1.00	16.24	A
	ATOM	296	N	LYS A 111	76.343	13.430	16.538	1.00	16.03	A
	ATOM	297	CA	LYS A 111	75.804	14.777	16.430	1.00	18.21	A
50	ATOM	298	CB	LYS A 111	75.341	15.065	14.997	1.00	19.36	A
	ATOM	299	CG	LYS A 111	75.035	16.548	14.768	1.00	22.68	A
	ATOM	300	CD	LYS A 111	74.461	16.844	13.396	1.00	23.67	A
	ATOM	301	CE	LYS A 111	74.876	18.222	12.930	1.00	23.08	A
	ATOM	302	NZ	LYS A 111	73.744	18.938	12.304	1.00	28.83	A
55	ATOM	303	C	LYS A 111	74.608	14.866	17.383	1.00	17.40	A
	ATOM	304	O	LYS A 111	73.646	14.115	17.239	1.00	18.27	A
	ATOM	305	N	ILE A 112	74.672	15.781	18.344	1.00	15.41	A
	ATOM	306	CA	ILE A 112	73.609	15.938	19.331	1.00	16.56	A
	ATOM	307	CB	ILE A 112	74.194	15.819	20.777	1.00	17.09	A

	ATOM	308	CG2	ILE A 112	73.073	15.926	21.830	1.00 11.60 A
	ATOM	309	CG1	ILE A 112	74.957	14.480	20.885	1.00 16.81 A
	ATOM	310	CD1	ILE A 112	75.771	14.262	22.178	1.00 15.96 A
	ATOM	311	C	ILE A 112	72.876	17.261	19.158	1.00 17.98 A
5	ATOM	312	O	ILE A 112	73.504	18.314	18.965	1.00 16.70 A
	ATOM	313	N	LEU A 113	71.546	17.198	19.195	1.00 19.61 A
	ATOM	314	CA	LEU A 113	70.711	18.393	19.034	1.00 21.99 A
	ATOM	315	CB	LEU A 113	70.058	18.434	17.641	1.00 22.17 A
	ATOM	316	CG	LEU A 113	70.906	18.273	16.367	1.00 22.83 A
10	ATOM	317	CD1	LEU A 113	71.124	16.792	16.059	1.00 22.72 A
	ATOM	318	CD2	LEU A 113	70.191	18.912	15.206	1.00 21.97 A
	ATOM	319	C	LEU A 113	69.612	18.419	20.088	1.00 24.22 A
	ATOM	320	O	LEU A 113	69.062	17.378	20.469	1.00 24.61 A
	ATOM	321	N	GLU A 114	69.285	19.615	20.559	1.00 27.06 A
15	ATOM	322	CA	GLU A 114	68.247	19.759	21.567	1.00 28.93 A
	ATOM	323	CB	GLU A 114	68.586	20.926	22.488	1.00 31.39 A
	ATOM	324	CG	GLU A 114	67.671	21.026	23.684	1.00 39.92 A
	ATOM	325	CD	GLU A 114	67.676	22.406	24.300	1.00 45.42 A
	ATOM	326	OE1	GLU A 114	67.160	23.356	23.655	1.00 46.90 A
20	ATOM	327	OE2	GLU A 114	68.204	22.540	25.429	1.00 50.09 A
	ATOM	328	C	GLU A 114	66.887	19.978	20.892	1.00 29.21 A
	ATOM	329	O	GLU A 114	66.679	20.969	20.177	1.00 29.53 A
	ATOM	330	N	LYS A 115	65.962	19.051	21.116	1.00 28.74 A
	ATOM	331	CA	LYS A 115	64.642	19.152	20.507	1.00 29.44 A
25	ATOM	332	CB	LYS A 115	63.744	18.002	20.987	1.00 28.12 A
	ATOM	333	CG	LYS A 115	63.827	16.758	20.103	1.00 28.47 A
	ATOM	334	CD	LYS A 115	63.026	15.571	20.639	1.00 27.07 A
	ATOM	335	CE	LYS A 115	63.738	14.854	21.779	1.00 28.88 A
	ATOM	336	NZ	LYS A 115	62.963	13.672	22.282	1.00 26.42 A
30	ATOM	337	C	LYS A 115	63.947	20.502	20.724	1.00 29.72 A
	ATOM	338	O	LYS A 115	63.310	21.025	19.799	1.00 30.03 A
	ATOM	339	N	ALA A 116	64.082	21.091	21.910	1.00 28.83 A
	ATOM	340	CA	ALA A 116	63.407	22.365	22.159	1.00 29.91 A
	ATOM	341	CB	ALA A 116	63.470	22.749	23.647	1.00 28.16 A
35	ATOM	342	C	ALA A 116	63.976	23.480	21.311	1.00 30.93 A
	ATOM	343	O	ALA A 116	63.231	24.217	20.667	1.00 32.28 A
	ATOM	344	N	HIS A 117	65.297	23.593	21.292	1.00 31.66 A
	ATOM	345	CA	HIS A 117	65.951	24.645	20.523	1.00 32.13 A
	ATOM	346	CB	HIS A 117	67.472	24.571	20.728	1.00 34.12 A
40	ATOM	347	CG	HIS A 117	68.219	25.741	20.169	1.00 37.74 A
	ATOM	348	CD2	HIS A 117	67.794	26.959	19.761	1.00 39.67 A
	ATOM	349	ND1	HIS A 117	69.582	25.727	19.966	1.00 42.04 A
	ATOM	350	CE1	HIS A 117	69.965	26.884	19.454	1.00 41.07 A
	ATOM	351	NE2	HIS A 117	68.899	27.649	19.320	1.00 40.56 A
45	ATOM	352	C	HIS A 117	65.600	24.547	19.040	1.00 31.36 A
	ATOM	353	O	HIS A 117	65.466	25.560	18.350	1.00 32.37 A
	ATOM	354	N	ILE A 118	65.430	23.330	18.544	1.00 30.26 A
	ATOM	355	CA	ILE A 118	65.102	23.158	17.132	1.00 29.28 A
	ATOM	356	CB	ILE A 118	65.266	21.696	16.712	1.00 27.64 A
50	ATOM	357	CG2	ILE A 118	64.560	21.439	15.401	1.00 22.46 A
	ATOM	358	CG1	ILE A 118	66.756	21.371	16.642	1.00 27.22 A
	ATOM	359	CD1	ILE A 118	67.036	19.917	16.437	1.00 30.51 A
	ATOM	360	C	ILE A 118	63.688	23.618	16.816	1.00 30.41 A
	ATOM	361	O	ILE A 118	63.444	24.251	15.785	1.00 29.55 A
55	ATOM	362	N	ILE A 119	62.756	23.291	17.705	1.00 29.59 A
	ATOM	363	CA	ILE A 119	61.376	23.682	17.497	1.00 29.18 A
	ATOM	364	CB	ILE A 119	60.447	22.979	18.506	1.00 27.15 A
	ATOM	365	CG2	ILE A 119	59.071	23.623	18.486	1.00 22.69 A
	ATOM	366	CG1	ILE A 119	60.394	21.486	18.173	1.00 23.45 A

	ATOM	367	CD1	ILE	A	119	59.666	20.665	19.173	1.00	19.08	A
	ATOM	368	C	ILE	A	119	61.223	25.194	17.617	1.00	30.65	A
	ATOM	369	O	ILE	A	119	60.574	25.832	16.786	1.00	30.59	A
	ATOM	370	N	ALA	A	120	61.837	25.768	18.642	1.00	31.95	A
5	ATOM	371	CA	ALA	A	120	61.752	27.205	18.848	1.00	33.69	A
	ATOM	372	CB	ALA	A	120	62.473	27.608	20.150	1.00	33.17	A
	ATOM	373	C	ALA	A	120	62.330	27.973	17.671	1.00	34.80	A
	ATOM	374	O	ALA	A	120	61.865	29.067	17.362	1.00	37.34	A
	ATOM	375	N	GLU	A	121	63.328	27.413	16.997	1.00	35.09	A
10	ATOM	376	CA	GLU	A	121	63.941	28.116	15.872	1.00	35.31	A
	ATOM	377	CB	GLU	A	121	65.453	27.927	15.933	1.00	39.72	A
	ATOM	378	CG	GLU	A	121	66.103	28.735	17.038	1.00	45.91	A
	ATOM	379	CD	GLU	A	121	65.955	30.225	16.784	1.00	49.51	A
	ATOM	380	OE1	GLU	A	121	66.634	30.736	15.866	1.00	52.87	A
15	ATOM	381	OE2	GLU	A	121	65.148	30.879	17.482	1.00	51.35	A
	ATOM	382	C	GLU	A	121	63.421	27.699	14.499	1.00	34.14	A
	ATOM	383	O	GLU	A	121	63.964	28.109	13.468	1.00	31.41	A
	ATOM	384	N	ASN	A	122	62.363	26.891	14.497	1.00	33.86	A
	ATOM	385	CA	ASN	A	122	61.771	26.367	13.266	1.00	34.00	A
20	ATOM	386	CB	ASN	A	122	61.112	27.473	12.464	1.00	36.75	A
	ATOM	387	CG	ASN	A	122	59.962	28.081	13.193	1.00	39.62	A
	ATOM	388	OD1	ASN	A	122	60.148	28.788	14.185	1.00	39.90	A
	ATOM	389	ND2	ASN	A	122	58.753	27.794	12.727	1.00	41.02	A
	ATOM	390	C	ASN	A	122	62.798	25.686	12.397	1.00	31.78	A
25	ATOM	391	O	ASN	A	122	62.958	26.035	11.230	1.00	32.05	A
	ATOM	392	N	LYS	A	123	63.494	24.714	12.965	1.00	28.71	A
	ATOM	393	CA	LYS	A	123	64.508	24.008	12.217	1.00	29.39	A
	ATOM	394	CB	LYS	A	123	65.842	24.036	12.974	1.00	31.70	A
	ATOM	395	CG	LYS	A	123	66.434	25.416	13.132	1.00	33.49	A
30	ATOM	396	CD	LYS	A	123	66.612	26.076	11.763	1.00	37.43	A
	ATOM	397	CE	LYS	A	123	67.174	27.491	11.898	1.00	38.52	A
	ATOM	398	NZ	LYS	A	123	67.337	28.176	10.582	1.00	37.85	A
	ATOM	399	C	LYS	A	123	64.116	22.572	11.931	1.00	28.30	A
	ATOM	400	O	LYS	A	123	64.867	21.844	11.289	1.00	29.68	A
35	ATOM	401	N	VAL	A	124	62.944	22.162	12.404	1.00	26.80	A
	ATOM	402	CA	VAL	A	124	62.484	20.796	12.175	1.00	26.73	A
	ATOM	403	CB	VAL	A	124	61.024	20.593	12.622	1.00	26.31	A
	ATOM	404	CG1	VAL	A	124	60.532	19.222	12.191	1.00	25.31	A
	ATOM	405	CG2	VAL	A	124	60.918	20.720	14.134	1.00	26.73	A
40	ATOM	406	C	VAL	A	124	62.594	20.351	10.722	1.00	27.11	A
	ATOM	407	O	VAL	A	124	62.973	19.218	10.450	1.00	29.79	A
	ATOM	408	N	PRO	A	125	62.270	21.228	9.763	1.00	27.28	A
	ATOM	409	CD	PRO	A	125	61.610	22.544	9.818	1.00	27.49	A
	ATOM	410	CA	PRO	A	125	62.386	20.758	8.378	1.00	27.41	A
45	ATOM	411	CB	PRO	A	125	61.775	21.904	7.563	1.00	26.08	A
	ATOM	412	CG	PRO	A	125	60.821	22.546	8.524	1.00	27.54	A
	ATOM	413	C	PRO	A	125	63.837	20.506	8.006	1.00	27.90	A
	ATOM	414	O	PRO	A	125	64.162	19.572	7.260	1.00	26.27	A
	ATOM	415	N	TYR	A	126	64.703	21.350	8.550	1.00	28.64	A
50	ATOM	416	CA	TYR	A	126	66.123	21.271	8.288	1.00	30.11	A
	ATOM	417	CB	TYR	A	126	66.791	22.528	8.809	1.00	36.70	A
	ATOM	418	CG	TYR	A	126	66.440	23.774	8.013	1.00	44.64	A
	ATOM	419	CD1	TYR	A	126	66.984	23.988	6.744	1.00	47.43	A
	ATOM	420	CE1	TYR	A	126	66.737	25.173	6.037	1.00	50.16	A
55	ATOM	421	CD2	TYR	A	126	65.620	24.774	8.557	1.00	47.03	A
	ATOM	422	CE2	TYR	A	126	65.369	25.955	7.861	1.00	49.52	A
	ATOM	423	CZ	TYR	A	126	65.936	26.152	6.605	1.00	50.60	A
	ATOM	424	OH	TYR	A	126	65.754	27.349	5.941	1.00	52.77	A
	ATOM	425	C	TYR	A	126	66.794	20.041	8.874	1.00	28.69	A

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     ATOM    426  O    TYR A 126      67.613  19.407   8.208  1.00 28.32 A
     ATOM    427  N    VAL A 127      66.464  19.714  10.118  1.00 25.64 A
     ATOM    428  CA   VAL A 127      67.033  18.550  10.766  1.00 24.89 A
     ATOM    429  CB   VAL A 127      66.664  18.513  12.258  1.00 26.70 A
  5  ATOM    430  CG1  VAL A 127      67.158  17.206  12.881  1.00 22.51 A
     ATOM    431  CG2  VAL A 127      67.255  19.743  12.972  1.00 23.84 A
     ATOM    432  C    VAL A 127      66.521  17.276  10.097  1.00 24.81 A
     ATOM    433  O    VAL A 127      67.260  16.315   9.890  1.00 24.02 A
     ATOM    434  N    THR A 128      65.245  17.290   9.755  1.00 24.02 A
 10  ATOM    435  CA   THR A 128      64.608  16.164   9.088  1.00 24.59 A
     ATOM    436  CB   THR A 128      63.123  16.471   8.843  1.00 25.38 A
     ATOM    437  OG1  THR A 128      62.478  16.652  10.106  1.00 25.76 A
     ATOM    438  CG2  THR A 128      62.451  15.354   8.066  1.00 22.88 A
     ATOM    439  C    THR A 128      65.266  15.875   7.744  1.00 24.53 A
 15  ATOM    440  O    THR A 128      65.560  14.729   7.426  1.00 25.53 A
     ATOM    441  N    ARG A 129      65.477  16.925   6.957  1.00 24.82 A
     ATOM    442  CA   ARG A 129      66.099  16.812   5.646  1.00 25.49 A
     ATOM    443  CB   ARG A 129      66.111  18.181   4.959  1.00 26.78 A
     ATOM    444  CG   ARG A 129      66.648  18.175   3.529  1.00 32.33 A
 20  ATOM    445  CD   ARG A 129      66.579  19.563   2.878  1.00 36.93 A
     ATOM    446  NE   ARG A 129      65.326  20.249   3.184  1.00 42.70 A
     ATOM    447  CZ   ARG A 129      65.254  21.462   3.730  1.00 46.67 A
     ATOM    448  NH1  ARG A 129      66.366  22.128   4.018  1.00 48.50 A
     ATOM    449  NH2  ARG A 129      64.073  21.997   4.027  1.00 48.90 A
 25  ATOM    450  C    ARG A 129      67.532  16.296   5.801  1.00 26.46 A
     ATOM    451  O    ARG A 129      68.002  15.456   5.020  1.00 24.59 A
     ATOM    452  N    GLU A 130      68.216  16.795   6.825  1.00 25.56 A
     ATOM    453  CA   GLU A 130      69.582  16.393   7.076  1.00 28.29 A
     ATOM    454  CB   GLU A 130      70.118  17.106   8.310  1.00 27.95 A
 30  ATOM    455  CG   GLU A 130      71.591  16.875   8.539  1.00 29.48 A
     ATOM    456  CD   GLU A 130      72.107  17.566   9.787  1.00 32.14 A
     ATOM    457  OE1  GLU A 130      71.297  18.221  10.483  1.00 32.67 A
     ATOM    458  OE2  GLU A 130      73.325  17.450  10.069  1.00 32.21 A
     ATOM    459  C    GLU A 130      69.665  14.886   7.279  1.00 29.26 A
 35  ATOM    460  O    GLU A 130      70.498  14.200   6.668  1.00 29.35 A
     ATOM    461  N    ARG A 131      68.797  14.382   8.150  1.00 30.84 A
     ATOM    462  CA   ARG A 131      68.763  12.966   8.451  1.00 31.62 A
     ATOM    463  CB   ARG A 131      67.786  12.684   9.598  1.00 33.12 A
     ATOM    464  CG   ARG A 131      67.557  11.190   9.831  1.00 36.17 A
 40  ATOM    465  CD   ARG A 131      66.560  10.925  10.946  1.00 41.69 A
     ATOM    466  NE   ARG A 131      66.330   9.492  11.166  1.00 46.62 A
     ATOM    467  CZ   ARG A 131      65.692   8.986  12.224  1.00 48.29 A
     ATOM    468  NH1  ARG A 131      65.215   9.795  13.165  1.00 49.51 A
     ATOM    469  NH2  ARG A 131      65.544   7.671  12.352  1.00 48.76 A
 45  ATOM    470  C    ARG A 131      68.371  12.138   7.235  1.00 30.59 A
     ATOM    471  O    ARG A 131      68.897  11.051   7.026  1.00 29.96 A
     ATOM    472  N    ASP A 132      67.446  12.649   6.433  1.00 29.54 A
     ATOM    473  CA   ASP A 132      67.000  11.913   5.259  1.00 29.40 A
     ATOM    474  CB   ASP A 132      65.735  12.565   4.708  1.00 32.43 A
 50  ATOM    475  CG   ASP A 132      64.531  12.395   5.655  1.00 38.15 A
     ATOM    476  OD1  ASP A 132      64.794  12.227   6.881  1.00 40.40 A
     ATOM    477  OD2  ASP A 132      63.365  12.439   5.186  1.00 41.19 A
     ATOM    478  C    ASP A 132      68.088  11.789   4.189  1.00 27.02 A
     ATOM    479  O    ASP A 132      68.232  10.744   3.553  1.00 26.54 A
 55  ATOM    480  N    VAL A 133      68.862  12.850   4.011  1.00 25.14 A
     ATOM    481  CA   VAL A 133      69.939  12.857   3.044  1.00 24.12 A
     ATOM    482  CB   VAL A 133      70.451  14.272   2.833  1.00 24.07 A
     ATOM    483  CG1  VAL A 133      71.802  14.247   2.143  1.00 23.77 A
     ATOM    484  CG2  VAL A 133      69.461  15.030   2.008  1.00 24.30 A
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	ATOM	485	C	VAL A 133	71.099	11.975	3.504	1.00	24.97 A
	ATOM	486	O	VAL A 133	71.672	11.221	2.712	1.00	24.95 A
	ATOM	487	N	MET A 134	71.458	12.074	4.779	1.00	23.41 A
	ATOM	488	CA	MET A 134	72.539	11.255	5.268	1.00	23.12 A
5	ATOM	489	CB	MET A 134	72.932	11.653	6.683	1.00	21.12 A
	ATOM	490	CG	MET A 134	73.608	13.005	6.759	1.00	21.21 A
	ATOM	491	SD	MET A 134	74.530	13.204	8.291	1.00	20.52 A
	ATOM	492	CE	MET A 134	73.172	13.347	9.534	1.00	17.71 A
	ATOM	493	C	MET A 134	72.163	9.783	5.237	1.00	24.75 A
10	ATOM	494	O	MET A 134	73.027	8.918	5.039	1.00	25.73 A
	ATOM	495	N	SER A 135	70.885	9.474	5.425	1.00	23.96 A
	ATOM	496	CA	SER A 135	70.484	8.064	5.408	1.00	24.82 A
	ATOM	497	CB	SER A 135	69.048	7.889	5.917	1.00	24.63 A
	ATOM	498	OG	SER A 135	68.139	8.496	5.015	1.00	29.80 A
15	ATOM	499	C	SER A 135	70.585	7.479	4.003	1.00	22.35 A
	ATOM	500	O	SER A 135	70.534	6.274	3.829	1.00	21.60 A
	ATOM	501	N	ARG A 136	70.729	8.335	3.004	1.00	21.91 A
	ATOM	502	CA	ARG A 136	70.815	7.858	1.631	1.00	23.76 A
	ATOM	503	CB	ARG A 136	69.988	8.762	0.714	1.00	25.55 A
20	ATOM	504	CG	ARG A 136	68.500	8.782	1.069	1.00	31.38 A
	ATOM	505	CD	ARG A 136	67.764	9.897	0.332	1.00	33.65 A
	ATOM	506	NE	ARG A 136	68.024	9.809	-1.099	1.00	38.77 A
	ATOM	507	CZ	ARG A 136	67.654	10.718	-1.996	1.00	41.27 A
	ATOM	508	NH1	ARG A 136	66.988	11.806	-1.604	1.00	42.53 A
25	ATOM	509	NH2	ARG A 136	67.971	10.544	-3.286	1.00	39.41 A
	ATOM	510	C	ARG A 136	72.248	7.789	1.131	1.00	22.64 A
	ATOM	511	O	ARG A 136	72.520	7.268	0.052	1.00	22.43 A
	ATOM	512	N	LEU A 137	73.168	8.318	1.919	1.00	22.66 A
	ATOM	513	CA	LEU A 137	74.568	8.307	1.535	1.00	22.60 A
30	ATOM	514	CB	LEU A 137	75.348	9.375	2.308	1.00	20.28 A
	ATOM	515	CG	LEU A 137	74.842	10.793	2.068	1.00	19.72 A
	ATOM	516	CD1	LEU A 137	75.695	11.816	2.840	1.00	17.83 A
	ATOM	517	CD2	LEU A 137	74.855	11.062	0.564	1.00	18.39 A
	ATOM	518	C	LEU A 137	75.195	6.950	1.775	1.00	22.60 A
35	ATOM	519	O	LEU A 137	75.203	6.445	2.892	1.00	23.75 A
	ATOM	520	N	ASP A 138	75.723	6.371	0.710	1.00	22.09 A
	ATOM	521	CA	ASP A 138	76.383	5.083	0.788	1.00	22.63 A
	ATOM	522	CB	ASP A 138	75.419	3.988	0.340	1.00	25.16 A
	ATOM	523	CG	ASP A 138	75.976	2.622	0.582	1.00	26.26 A
40	ATOM	524	OD1	ASP A 138	76.658	2.480	1.611	1.00	27.29 A
	ATOM	525	OD2	ASP A 138	75.740	1.708	-0.237	1.00	30.75 A
	ATOM	526	C	ASP A 138	77.617	5.112	-0.124	1.00	20.82 A
	ATOM	527	O	ASP A 138	77.656	4.445	-1.155	1.00	22.94 A
	ATOM	528	N	HIS A 139	78.612	5.902	0.250	1.00	16.77 A
45	ATOM	529	CA	HIS A 139	79.813	6.050	-0.557	1.00	16.21 A
	ATOM	530	CB	HIS A 139	79.614	7.180	-1.583	1.00	15.30 A
	ATOM	531	CG	HIS A 139	80.755	7.348	-2.534	1.00	16.37 A
	ATOM	532	CD2	HIS A 139	80.853	7.087	-3.860	1.00	15.32 A
	ATOM	533	ND1	HIS A 139	81.998	7.802	-2.139	1.00	17.12 A
50	ATOM	534	CE1	HIS A 139	82.811	7.810	-3.184	1.00	15.92 A
	ATOM	535	NE2	HIS A 139	82.140	7.380	-4.238	1.00	13.96 A
	ATOM	536	C	HIS A 139	80.985	6.371	0.357	1.00	16.70 A
	ATOM	537	O	HIS A 139	80.848	7.116	1.317	1.00	16.89 A
	ATOM	538	N	PRO A 140	82.164	5.823	0.056	1.00	16.94 A
55	ATOM	539	CD	PRO A 140	82.508	4.991	-1.108	1.00	17.10 A
	ATOM	540	CA	PRO A 140	83.334	6.079	0.895	1.00	17.98 A
	ATOM	541	CB	PRO A 140	84.390	5.163	0.291	1.00	17.03 A
	ATOM	542	CG	PRO A 140	84.003	5.114	-1.159	1.00	18.59 A
	ATOM	543	C	PRO A 140	83.822	7.528	1.070	1.00	18.59 A

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     ATOM   544  O    PRO A 140      84.528   7.817   2.021  1.00 20.11 A
     ATOM   545  N    PHE A 141      83.460   8.444   0.179  1.00 19.62 A
     ATOM   546  CA   PHE A 141      83.909   9.833   0.345  1.00 18.34 A
     ATOM   547  CB   PHE A 141      84.223  10.474  -1.010  1.00 17.53 A
 5   ATOM   548  CG   PHE A 141      85.440   9.880  -1.694  1.00 17.38 A
     ATOM   549  CD1  PHE A 141      86.450   9.275  -0.938  1.00 17.01 A
     ATOM   550  CD2  PHE A 141      85.579   9.926  -3.081  1.00 15.76 A
     ATOM   551  CE1  PHE A 141      87.572   8.724  -1.550  1.00 16.13 A
     ATOM   552  CE2  PHE A 141      86.707   9.375  -3.708  1.00 16.99 A
10   ATOM   553  CZ   PHE A 141      87.705   8.772  -2.938  1.00 15.01 A
     ATOM   554  C    PHE A 141      82.893  10.680   1.095  1.00 18.14 A
     ATOM   555  O    PHE A 141      83.012  11.896   1.144  1.00 20.74 A
     ATOM   556  N    PHE A 142      81.901  10.037   1.697  1.00 15.85 A
     ATOM   557  CA   PHE A 142      80.887  10.761   2.444  1.00 15.95 A
15   ATOM   558  CB   PHE A 142      79.558  10.757   1.690  1.00 15.20 A
     ATOM   559  CG   PHE A 142      79.507  11.721   0.542  1.00 15.62 A
     ATOM   560  CD1  PHE A 142      79.295  13.086   0.768  1.00 14.51 A
     ATOM   561  CD2  PHE A 142      79.651  11.265  -0.771  1.00 12.05 A
     ATOM   562  CE1  PHE A 142      79.222  13.991  -0.291  1.00 13.97 A
20   ATOM   563  CE2  PHE A 142      79.582  12.157  -1.840  1.00 15.46 A
     ATOM   564  CZ   PHE A 142      79.365  13.536  -1.601  1.00 14.89 A
     ATOM   565  C    PHE A 142      80.654  10.167   3.824  1.00 15.60 A
     ATOM   566  O    PHE A 142      80.886   8.986   4.061  1.00 15.39 A
     ATOM   567  N    VAL A 143      80.182  11.001   4.733  1.00 15.87 A
25   ATOM   568  CA   VAL A 143      79.878  10.564   6.075  1.00 15.04 A
     ATOM   569  CB   VAL A 143      79.304  11.727   6.905  1.00 15.95 A
     ATOM   570  CG1  VAL A 143      78.012  12.231   6.276  1.00 11.03 A
     ATOM   571  CG2  VAL A 143      79.100  11.296   8.350  1.00 14.40 A
     ATOM   572  C    VAL A 143      78.828   9.479   5.935  1.00 15.52 A
30   ATOM   573  O    VAL A 143      78.076   9.453   4.963  1.00 15.45 A
     ATOM   574  N    LYS A 144      78.794   8.580   6.907  1.00 16.29 A
     ATOM   575  CA   LYS A 144      77.848   7.482   6.933  1.00 17.45 A
     ATOM   576  CB   LYS A 144      78.625   6.150   6.895  1.00 18.05 A
     ATOM   577  CG   LYS A 144      77.963   4.967   7.596  1.00 24.34 A
35   ATOM   578  CD   LYS A 144      76.922   4.263   6.752  1.00 26.35 A
     ATOM   579  CE   LYS A 144      77.461   2.926   6.213  1.00 30.22 A
     ATOM   580  NZ   LYS A 144      77.576   1.882   7.271  1.00 28.27 A
     ATOM   581  C    LYS A 144      77.024   7.626   8.222  1.00 17.39 A
     ATOM   582  O    LYS A 144      77.565   7.913   9.284  1.00 16.92 A
40   ATOM   583  N    LEU A 145      75.711   7.458   8.116  1.00 17.41 A
     ATOM   584  CA   LEU A 145      74.836   7.549   9.274  1.00 18.13 A
     ATOM   585  CB   LEU A 145      73.514   8.210   8.893  1.00 18.86 A
     ATOM   586  CG   LEU A 145      72.612   8.850   9.964  1.00 20.13 A
     ATOM   587  CD1  LEU A 145      71.157   8.607   9.582  1.00 19.48 A
45   ATOM   588  CD2  LEU A 145      72.900   8.311  11.331  1.00 17.86 A
     ATOM   589  C    LEU A 145      74.559   6.113   9.689  1.00 18.85 A
     ATOM   590  O    LEU A 145      73.905   5.379   8.954  1.00 20.15 A
     ATOM   591  N    TYR A 146      75.030   5.713  10.867  1.00 18.09 A
     ATOM   592  CA   TYR A 146      74.830   4.341  11.329  1.00 15.93 A
50   ATOM   593  CB   TYR A 146      76.013   3.871  12.154  1.00 14.52 A
     ATOM   594  CG   TYR A 146      77.295   3.776  11.390  1.00 13.98 A
     ATOM   595  CD1  TYR A 146      78.093   4.907  11.193  1.00 15.01 A
     ATOM   596  CE1  TYR A 146      79.324   4.815  10.548  1.00 14.94 A
     ATOM   597  CD2  TYR A 146      77.752   2.541  10.912  1.00 14.36 A
55   ATOM   598  CE2  TYR A 146      78.984   2.426  10.266  1.00 15.47 A
     ATOM   599  CZ   TYR A 146      79.770   3.566  10.090  1.00 15.70 A
     ATOM   600  OH   TYR A 146      80.999   3.473   9.491  1.00 16.29 A
     ATOM   601  C    TYR A 146      73.591   4.135  12.154  1.00 16.74 A
     ATOM   602  O    TYR A 146      73.004   3.050  12.132  1.00 17.63 A
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      ATOM    603  N   PHE A 147      73.198   5.158  12.901  1.00 15.90 A
      ATOM    604  CA  PHE A 147      72.012   5.041  13.745  1.00 17.10 A
      ATOM    605  CB  PHE A 147      72.265   4.057  14.932  1.00 14.80 A
      ATOM    606  CG  PHE A 147      73.509   4.366  15.747  1.00 16.36 A
   5  ATOM    607  CD1 PHE A 147      73.526   5.427  16.657  1.00 15.38 A
      ATOM    608  CD2 PHE A 147      74.701   3.663  15.514  1.00 16.83 A
      ATOM    609  CE1 PHE A 147      74.709   5.801  17.314  1.00 15.96 A
      ATOM    610  CE2 PHE A 147      75.907   4.024  16.163  1.00 16.65 A
      ATOM    611  CZ  PHE A 147      75.908   5.107  17.069  1.00 16.96 A
  10  ATOM    612  C   PHE A 147      71.550   6.378  14.286  1.00 17.73 A
      ATOM    613  O   PHE A 147      72.225   7.399  14.145  1.00 18.47 A
      ATOM    614  N   THR A 148      70.376   6.352  14.897  1.00 19.28 A
      ATOM    615  CA  THR A 148      69.801   7.529  15.532  1.00 19.50 A
      ATOM    616  CB  THR A 148      68.846   8.308  14.597  1.00 19.24 A
  15  ATOM    617  OG1 THR A 148      67.722   7.485  14.271  1.00 18.29 A
      ATOM    618  CG2 THR A 148      69.563   8.727  13.311  1.00 18.53 A
      ATOM    619  C   THR A 148      68.976   7.071  16.718  1.00 19.68 A
      ATOM    620  O   THR A 148      68.556   5.915  16.802  1.00 20.20 A
      ATOM    621  N   PHE A 149      68.765   7.975  17.653  1.00 20.20 A
  20  ATOM    622  CA  PHE A 149      67.926   7.687  18.797  1.00 20.34 A
      ATOM    623  CB  PHE A 149      68.558   6.626  19.728  1.00 19.06 A
      ATOM    624  CG  PHE A 149      69.932   6.961  20.216  1.00 18.27 A
      ATOM    625  CD1 PHE A 149      70.114   7.745  21.357  1.00 19.90 A
      ATOM    626  CD2 PHE A 149      71.049   6.467  19.559  1.00 19.21 A
  25  ATOM    627  CE1 PHE A 149      71.387   8.028  21.840  1.00 19.04 A
      ATOM    628  CE2 PHE A 149      72.341   6.741  20.025  1.00 19.95 A
      ATOM    629  CZ  PHE A 149      72.513   7.520  21.167  1.00 21.19 A
      ATOM    630  C   PHE A 149      67.693   9.004  19.487  1.00 20.94 A
      ATOM    631  O   PHE A 149      68.192  10.035  19.042  1.00 17.91 A
  30  ATOM    632  N   GLN A 150      66.888   8.988  20.539  1.00 25.44 A
      ATOM    633  CA  GLN A 150      66.609  10.212  21.279  1.00 29.09 A
      ATOM    634  CB  GLN A 150      65.518  11.039  20.571  1.00 29.07 A
      ATOM    635  CG  GLN A 150      64.194  10.322  20.309  1.00 31.07 A
      ATOM    636  CD  GLN A 150      63.150  11.227  19.609  1.00 32.52 A
  35  ATOM    637  OE1 GLN A 150      62.503  12.075  20.243  1.00 30.50 A
      ATOM    638  NE2 GLN A 150      63.009  11.056  18.294  1.00 29.34 A
      ATOM    639  C   GLN A 150      66.190   9.927  22.707  1.00 29.59 A
      ATOM    640  O   GLN A 150      65.738   8.832  23.018  1.00 30.34 A
      ATOM    641  N   ASP A 151      66.407  10.892  23.590  1.00 31.52 A
  40  ATOM    642  CA  ASP A 151      65.957  10.750  24.967  1.00 32.22 A
      ATOM    643  CB  ASP A 151      67.093  10.948  25.974  1.00 31.30 A
      ATOM    644  CG  ASP A 151      67.832  12.246  25.790  1.00 32.39 A
      ATOM    645  OD1 ASP A 151      67.241  13.217  25.263  1.00 34.30 A
      ATOM    646  OD2 ASP A 151      69.011  12.290  26.195  1.00 32.02 A
  45  ATOM    647  C   ASP A 151      64.914  11.858  25.063  1.00 33.56 A
      ATOM    648  O   ASP A 151      64.495  12.387  24.033  1.00 34.76 A
      ATOM    649  N   ASP A 152      64.498  12.239  26.261  1.00 35.00 A
      ATOM    650  CA  ASP A 152      63.462  13.268  26.369  1.00 36.72 A
      ATOM    651  CB  ASP A 152      63.053  13.465  27.830  1.00 38.27 A
  50  ATOM    652  CG  ASP A 152      62.237  12.312  28.351  1.00 42.45 A
      ATOM    653  OD1 ASP A 152      61.377  11.824  27.579  1.00 43.52 A
      ATOM    654  OD2 ASP A 152      62.444  11.900  29.519  1.00 44.28 A
      ATOM    655  C   ASP A 152      63.758  14.627  25.759  1.00 36.47 A
      ATOM    656  O   ASP A 152      62.857  15.289  25.242  1.00 36.12 A
  55  ATOM    657  N   GLU A 153      65.021  15.029  25.781  1.00 36.69 A
      ATOM    658  CA  GLU A 153      65.358  16.343  25.292  1.00 35.16 A
      ATOM    659  CB  GLU A 153      65.976  17.137  26.442  1.00 39.45 A
      ATOM    660  CG  GLU A 153      65.486  16.714  27.830  1.00 45.94 A
      ATOM    661  CD  GLU A 153      66.383  15.652  28.468  1.00 51.78 A
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      ATOM    662   OE1  GLU A 153        67.563  15.977  28.746  1.00 54.51 A
      ATOM    663   OE2  GLU A 153        65.924  14.500  28.689  1.00 52.47 A
      ATOM    664   C    GLU A 153        66.258  16.455  24.073  1.00 32.91 A
      ATOM    665   O    GLU A 153        66.304  17.524  23.457  1.00 31.19 A
   5  ATOM    666   N    LYS A 154        66.959  15.376  23.710  1.00 30.19 A
      ATOM    667   CA   LYS A 154        67.898  15.431  22.582  1.00 26.56 A
      ATOM    668   CB   LYS A 154        69.323  15.414  23.121  1.00 24.92 A
      ATOM    669   CG   LYS A 154        69.630  16.551  24.041  1.00 23.66 A
      ATOM    670   CD   LYS A 154        70.944  16.355  24.750  1.00 20.95 A
  10  ATOM    671   CE   LYS A 154        71.274  17.583  25.576  1.00 18.98 A
      ATOM    672   NZ   LYS A 154        72.491  17.388  26.360  1.00 19.19 A
      ATOM    673   C    LYS A 154        67.806  14.374  21.487  1.00 25.00 A
      ATOM    674   O    LYS A 154        67.342  13.257  21.701  1.00 25.62 A
      ATOM    675   N    LEU A 155        68.276  14.759  20.308  1.00 23.36 A
  15  ATOM    676   CA   LEU A 155        68.337  13.881  19.140  1.00 22.19 A
      ATOM    677   CB   LEU A 155        67.946  14.624  17.864  1.00 21.64 A
      ATOM    678   CG   LEU A 155        66.539  15.167  17.707  1.00 22.58 A
      ATOM    679   CD1  LEU A 155        66.437  15.847  16.350  1.00 22.74 A
      ATOM    680   CD2  LEU A 155        65.533  14.034  17.815  1.00 23.23 A
  20  ATOM    681   C    LEU A 155        69.798  13.474  19.004  1.00 20.69 A
      ATOM    682   O    LEU A 155        70.693  14.287  19.249  1.00 21.61 A
      ATOM    683   N    TYR A 156        70.036  12.238  18.592  1.00 18.69 A
      ATOM    684   CA   TYR A 156        71.393  11.737  18.431  1.00 18.65 A
      ATOM    685   CB   TYR A 156        71.690  10.661  19.489  1.00 18.51 A
  25  ATOM    686   CG   TYR A 156        71.602  11.148  20.913  1.00 17.86 A
      ATOM    687   CD1  TYR A 156        70.372  11.287  21.550  1.00 18.38 A
      ATOM    688   CE1  TYR A 156        70.286  11.752  22.862  1.00 18.95 A
      ATOM    689   CD2  TYR A 156        72.755  11.488  21.621  1.00 19.32 A
      ATOM    690   CE2  TYR A 156        72.690  11.957  22.942  1.00 18.14 A
  30  ATOM    691   CZ   TYR A 156        71.449  12.086  23.551  1.00 18.56 A
      ATOM    692   OH   TYR A 156        71.372  12.547  24.838  1.00 18.33 A
      ATOM    693   C    TYR A 156        71.640  11.125  17.059  1.00 18.03 A
      ATOM    694   O    TYR A 156        70.903  10.250  16.646  1.00 18.18 A
      ATOM    695   N    PHE A 157        72.662  11.568  16.338  1.00 17.19 A
  35  ATOM    696   CA   PHE A 157        72.937  10.934  15.062  1.00 17.15 A
      ATOM    697   CB   PHE A 157        72.980  11.951  13.918  1.00 21.54 A
      ATOM    698   CG   PHE A 157        71.663  12.638  13.651  1.00 26.82 A
      ATOM    699   CD1  PHE A 157        70.471  12.165  14.221  1.00 30.87 A
      ATOM    700   CD2  PHE A 157        71.617  13.794  12.869  1.00 28.42 A
  40  ATOM    701   CE1  PHE A 157        69.249  12.845  14.024  1.00 30.45 A
      ATOM    702   CE2  PHE A 157        70.407  14.483  12.661  1.00 29.44 A
      ATOM    703   CZ   PHE A 157        69.224  14.008  13.243  1.00 30.41 A
      ATOM    704   C    PHE A 157        74.286  10.244  15.184  1.00 16.38 A
      ATOM    705   O    PHE A 157        75.256  10.883  15.527  1.00 17.91 A
  45  ATOM    706   N    GLY A 158        74.347   8.942  14.919  1.00 16.20 A
      ATOM    707   CA   GLY A 158        75.614   8.232  15.009  1.00 15.78 A
      ATOM    708   C    GLY A 158        76.322   8.285  13.671  1.00 16.51 A
      ATOM    709   O    GLY A 158        75.876   7.659  12.710  1.00 17.95 A
      ATOM    710   N    LEU A 159        77.423   9.028  13.600  1.00 14.97 A
  50  ATOM    711   CA   LEU A 159        78.143   9.177  12.342  1.00 15.17 A
      ATOM    712   CB   LEU A 159        78.264  10.669  12.012  1.00 13.14 A
      ATOM    713   CG   LEU A 159        76.989  11.518  12.133  1.00 12.95 A
      ATOM    714   CD1  LEU A 159        77.347  13.002  11.872  1.00  7.84 A
      ATOM    715   CD2  LEU A 159        75.926  11.020  11.138  1.00 11.24 A
  55  ATOM    716   C    LEU A 159        79.535   8.540  12.300  1.00 15.49 A
      ATOM    717   O    LEU A 159        80.136   8.256  13.333  1.00 15.76 A
      ATOM    718   N    SER A 160        80.051   8.313  11.097  1.00 14.32 A
      ATOM    719   CA   SER A 160        81.389   7.759  10.984  1.00 14.68 A
      ATOM    720   CB   SER A 160        81.699   7.386   9.529  1.00 12.79 A
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     ATOM   721  OG  SER A 160      81.395   8.432   8.626  1.00 16.15 A
     ATOM   722  C   SER A 160      82.365   8.823  11.509  1.00 15.82 A
     ATOM   723  O   SER A 160      82.152  10.029  11.333  1.00 17.75 A
     ATOM   724  N   TYR A 161      83.418   8.386  12.184  1.00 16.30 A
 5   ATOM   725  CA  TYR A 161      84.399   9.309  12.740  1.00 17.11 A
     ATOM   726  CB  TYR A 161      84.863   8.785  14.100  1.00 16.09 A
     ATOM   727  CG  TYR A 161      86.020   9.529  14.717  1.00 19.80 A
     ATOM   728  CD1 TYR A 161      86.070  10.933  14.700  1.00 18.64 A
     ATOM   729  CE1 TYR A 161      87.091  11.625  15.345  1.00 19.50 A
10   ATOM   730  CD2 TYR A 161      87.032   8.837  15.394  1.00 20.09 A
     ATOM   731  CE2 TYR A 161      88.057   9.517  16.047  1.00 21.66 A
     ATOM   732  CZ  TYR A 161      88.085  10.918  16.022  1.00 23.52 A
     ATOM   733  OH  TYR A 161      89.111  11.600  16.674  1.00 22.64 A
     ATOM   734  C   TYR A 161      85.594   9.495  11.815  1.00 17.86 A
15   ATOM   735  O   TYR A 161      86.269   8.527  11.459  1.00 19.30 A
     ATOM   736  N   ALA A 162      85.854  10.736  11.418  1.00 18.22 A
     ATOM   737  CA  ALA A 162      86.990  11.040  10.546  1.00 19.59 A
     ATOM   738  CB  ALA A 162      86.569  12.063   9.466  1.00 19.99 A
     ATOM   739  C   ALA A 162      88.051  11.629  11.472  1.00 19.11 A
20   ATOM   740  O   ALA A 162      88.050  12.828  11.736  1.00 18.81 A
     ATOM   741  N   ALA A 163      88.952  10.775  11.956  1.00 18.78 A
     ATOM   742  CA  ALA A 163      89.994  11.165  12.918  1.00 18.84 A
     ATOM   743  CB  ALA A 163      90.867   9.924  13.279  1.00 19.04 A
     ATOM   744  C   ALA A 163      90.908  12.357  12.604  1.00 18.22 A
25   ATOM   745  O   ALA A 163      91.290  13.101  13.508  1.00 16.79 A
     ATOM   746  N   ASN A 164      91.251  12.560  11.340  1.00 17.46 A
     ATOM   747  CA  ASN A 164      92.148  13.645  11.023  1.00 17.79 A
     ATOM   748  CB  ASN A 164      92.990  13.270   9.803  1.00 20.45 A
     ATOM   749  CG  ASN A 164      93.919  12.092  10.097  1.00 21.08 A
30   ATOM   750  OD1 ASN A 164      94.663  12.117  11.066  1.00 21.57 A
     ATOM   751  ND2 ASN A 164      93.862  11.059   9.271  1.00 24.54 A
     ATOM   752  C   ASN A 164      91.555  15.044  10.889  1.00 18.34 A
     ATOM   753  O   ASN A 164      92.293  16.005  10.634  1.00 19.83 A
     ATOM   754  N   GLY A 165      90.247  15.176  11.083  1.00 15.01 A
35   ATOM   755  CA  GLY A 165      89.644  16.490  11.022  1.00 15.54 A
     ATOM   756  C   GLY A 165      89.580  17.212   9.683  1.00 17.67 A
     ATOM   757  O   GLY A 165      89.607  16.600   8.613  1.00 19.49 A
     ATOM   758  N   GLU A 166      89.510  18.534   9.753  1.00 17.46 A
     ATOM   759  CA  GLU A 166      89.378  19.379   8.577  1.00 19.26 A
40   ATOM   760  CB  GLU A 166      89.064  20.805   9.019  1.00 21.87 A
     ATOM   761  CG  GLU A 166      88.057  20.917  10.149  1.00 24.70 A
     ATOM   762  CD  GLU A 166      87.723  22.359  10.477  1.00 26.05 A
     ATOM   763  OE1 GLU A 166      88.468  23.251  10.001  1.00 25.93 A
     ATOM   764  OE2 GLU A 166      86.726  22.598  11.213  1.00 25.24 A
45   ATOM   765  C   GLU A 166      90.538  19.441   7.592  1.00 20.11 A
     ATOM   766  O   GLU A 166      91.707  19.501   7.978  1.00 22.88 A
     ATOM   767  N   LEU A 167      90.195  19.443   6.312  1.00 18.72 A
     ATOM   768  CA  LEU A 167      91.173  19.565   5.242  1.00 17.38 A
     ATOM   769  CB  LEU A 167      90.463  19.516   3.888  1.00 15.71 A
50   ATOM   770  CG  LEU A 167      91.238  19.817   2.601  1.00 15.42 A
     ATOM   771  CD1 LEU A 167      92.242  18.704   2.343  1.00 14.98 A
     ATOM   772  CD2 LEU A 167      90.265  19.947   1.416  1.00 12.32 A
     ATOM   773  C   LEU A 167      91.817  20.940   5.438  1.00 19.20 A
     ATOM   774  O   LEU A 167      93.030  21.103   5.266  1.00 19.61 A
55   ATOM   775  N   LEU A 168      91.001  21.928   5.812  1.00 20.53 A
     ATOM   776  CA  LEU A 168      91.516  23.277   6.033  1.00 22.20 A
     ATOM   777  CB  LEU A 168      90.436  24.192   6.637  1.00 20.41 A
     ATOM   778  CG  LEU A 168      90.923  25.611   7.024  1.00 21.71 A
     ATOM   779  CD1 LEU A 168      91.275  26.413   5.768  1.00 20.09 A
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	ATOM	780	CD2	LEU A 168	89.837	26.341	7.797	1.00	20.84	A
	ATOM	781	C	LEU A 168	92.731	23.245	6.968	1.00	23.07	A
	ATOM	782	O	LEU A 168	93.636	24.054	6.838	1.00	22.18	A
	ATOM	783	N	LYS A 169	92.742	22.305	7.905	1.00	24.67	A
5	ATOM	784	CA	LYS A 169	93.844	22.192	8.850	1.00	28.56	A
	ATOM	785	CB	LYS A 169	93.561	21.076	9.858	1.00	31.12	A
	ATOM	786	CG	LYS A 169	94.615	20.933	10.938	1.00	35.60	A
	ATOM	787	CD	LYS A 169	94.436	19.652	11.765	1.00	39.37	A
	ATOM	788	CE	LYS A 169	94.832	18.410	10.961	1.00	42.26	A
10	ATOM	789	NZ	LYS A 169	94.664	17.131	11.725	1.00	42.83	A
	ATOM	790	C	LYS A 169	95.151	21.902	8.119	1.00	29.24	A
	ATOM	791	O	LYS A 169	96.190	22.505	8.398	1.00	30.32	A
	ATOM	792	N	TYR A 170	95.101	20.970	7.179	1.00	29.12	A
	ATOM	793	CA	TYR A 170	96.290	20.619	6.423	1.00	28.18	A
15	ATOM	794	CB	TYR A 170	96.037	19.344	5.637	1.00	25.30	A
	ATOM	795	CG	TYR A 170	95.926	18.182	6.569	1.00	27.01	A
	ATOM	796	CD1	TYR A 170	97.072	17.533	7.053	1.00	26.92	A
	ATOM	797	CE1	TYR A 170	96.974	16.532	8.008	1.00	25.37	A
	ATOM	798	CD2	TYR A 170	94.688	17.792	7.062	1.00	25.14	A
20	ATOM	799	CE2	TYR A 170	94.580	16.807	8.009	1.00	26.49	A
	ATOM	800	CZ	TYR A 170	95.720	16.179	8.484	1.00	26.98	A
	ATOM	801	OH	TYR A 170	95.580	15.223	9.456	1.00	27.66	A
	ATOM	802	C	TYR A 170	96.690	21.742	5.507	1.00	28.69	A
	ATOM	803	O	TYR A 170	97.875	21.971	5.285	1.00	30.98	A
25	ATOM	804	N	ILE A 171	95.705	22.452	4.976	1.00	28.95	A
	ATOM	805	CA	ILE A 171	96.006	23.550	4.088	1.00	29.79	A
	ATOM	806	CB	ILE A 171	94.721	24.233	3.579	1.00	29.29	A
	ATOM	807	CG2	ILE A 171	95.082	25.439	2.714	1.00	28.21	A
	ATOM	808	CG1	ILE A 171	93.906	23.227	2.747	1.00	29.66	A
30	ATOM	809	CD1	ILE A 171	92.567	23.754	2.224	1.00	29.13	A
	ATOM	810	C	ILE A 171	96.897	24.536	4.833	1.00	31.13	A
	ATOM	811	O	ILE A 171	97.925	24.956	4.300	1.00	30.93	A
	ATOM	812	N	ARG A 172	96.525	24.862	6.075	1.00	32.00	A
	ATOM	813	CA	ARG A 172	97.294	25.789	6.903	1.00	32.60	A
35	ATOM	814	CB	ARG A 172	96.527	26.175	8.163	1.00	32.77	A
	ATOM	815	CG	ARG A 172	95.257	26.982	7.972	1.00	38.24	A
	ATOM	816	CD	ARG A 172	94.853	27.602	9.335	1.00	43.47	A
	ATOM	817	NE	ARG A 172	93.501	28.181	9.412	1.00	46.65	A
	ATOM	818	CZ	ARG A 172	92.903	28.888	8.448	1.00	47.62	A
40	ATOM	819	NH1	ARG A 172	93.517	29.115	7.287	1.00	47.16	A
	ATOM	820	NH2	ARG A 172	91.691	29.398	8.669	1.00	45.61	A
	ATOM	821	C	ARG A 172	98.646	25.219	7.338	1.00	32.95	A
	ATOM	822	O	ARG A 172	99.644	25.920	7.311	1.00	34.27	A
	ATOM	823	N	ALA A 173	98.674	23.960	7.761	1.00	32.74	A
45	ATOM	824	CA	ALA A 173	99.912	23.341	8.209	1.00	32.81	A
	ATOM	825	CB	ALA A 173	99.668	21.896	8.619	1.00	32.72	A
	ATOM	826	C	ALA A 173	101.005	23.400	7.152	1.00	33.67	A
	ATOM	827	O	ALA A 173	102.125	23.817	7.438	1.00	33.78	A
	ATOM	828	N	ILE A 174	100.698	22.995	5.926	1.00	33.50	A
50	ATOM	829	CA	ILE A 174	101.728	23.030	4.896	1.00	33.22	A
	ATOM	830	CB	ILE A 174	101.731	21.736	4.043	1.00	33.98	A
	ATOM	831	CG2	ILE A 174	101.725	20.502	4.950	1.00	32.94	A
	ATOM	832	CG1	ILE A 174	100.517	21.709	3.125	1.00	33.93	A
	ATOM	833	CD1	ILE A 174	100.602	20.631	2.080	1.00	36.79	A
55	ATOM	834	C	ILE A 174	101.638	24.231	3.957	1.00	32.69	A
	ATOM	835	O	ILE A 174	102.326	24.269	2.938	1.00	33.88	A
	ATOM	836	N	GLY A 175	100.792	25.204	4.287	1.00	31.76	A
	ATOM	837	CA	GLY A 175	100.671	26.386	3.446	1.00	32.03	A
	ATOM	838	C	GLY A 175	99.838	26.223	2.184	1.00	32.77	A

	ATOM	839	O	GLY A 175	98.870	26.958	1.976	1.00 35.12 A
	ATOM	840	N	SER A 176	100.225	25.291	1.322	1.00 31.63 A
	ATOM	841	CA	SER A 176	99.489	25.018	0.091	1.00 31.11 A
	ATOM	842	CB	SER A 176	99.810	26.040	-0.996	1.00 31.54 A
5	ATOM	843	OG	SER A 176	101.141	25.874	-1.464	1.00 33.96 A
	ATOM	844	C	SER A 176	99.946	23.640	-0.354	1.00 30.72 A
	ATOM	845	O	SER A 176	100.977	23.154	0.111	1.00 31.29 A
	ATOM	846	N	PHE A 177	99.180	23.018	-1.246	1.00 28.27 A
	ATOM	847	CA	PHE A 177	99.475	21.683	-1.738	1.00 26.97 A
10	ATOM	848	CB	PHE A 177	98.169	20.948	-2.060	1.00 27.18 A
	ATOM	849	CG	PHE A 177	97.376	20.530	-0.854	1.00 27.90 A
	ATOM	850	CD1	PHE A 177	97.551	21.155	0.379	1.00 26.91 A
	ATOM	851	CD2	PHE A 177	96.432	19.503	-0.957	1.00 27.62 A
	ATOM	852	CE1	PHE A 177	96.812	20.762	1.477	1.00 26.03 A
15	ATOM	853	CE2	PHE A 177	95.684	19.106	0.144	1.00 23.95 A
	ATOM	854	CZ	PHE A 177	95.873	19.730	1.357	1.00 25.81 A
	ATOM	855	C	PHE A 177	100.299	21.726	-3.008	1.00 26.99 A
	ATOM	856	O	PHE A 177	100.115	22.618	-3.832	1.00 27.45 A
	ATOM	857	N	ASP A 178	101.200	20.762	-3.179	1.00 26.09 A
20	ATOM	858	CA	ASP A 178	101.967	20.704	-4.411	1.00 26.80 A
	ATOM	859	CB	ASP A 178	103.135	19.730	-4.303	1.00 27.73 A
	ATOM	860	CG	ASP A 178	102.689	18.318	-4.023	1.00 33.79 A
	ATOM	861	OD1	ASP A 178	101.601	17.919	-4.510	1.00 37.57 A
	ATOM	862	OD2	ASP A 178	103.431	17.590	-3.324	1.00 35.89 A
25	ATOM	863	C	ASP A 178	100.955	20.202	-5.443	1.00 25.72 A
	ATOM	864	O	ASP A 178	99.763	20.063	-5.128	1.00 24.80 A
	ATOM	865	N	GLU A 179	101.419	19.897	-6.650	1.00 24.80 A
	ATOM	866	CA	GLU A 179	100.514	19.444	-7.697	1.00 25.67 A
	ATOM	867	CB	GLU A 179	101.187	19.554	-9.052	1.00 27.44 A
30	ATOM	868	CG	GLU A 179	100.197	19.921	-10.129	1.00 31.17 A
	ATOM	869	CD	GLU A 179	100.823	19.999	-11.492	1.00 35.24 A
	ATOM	870	OE1	GLU A 179	102.016	20.372	-11.572	1.00 35.82 A
	ATOM	871	OE2	GLU A 179	100.116	19.707	-12.488	1.00 38.12 A
	ATOM	872	C	GLU A 179	99.917	18.041	-7.560	1.00 24.90 A
35	ATOM	873	O	GLU A 179	98.755	17.822	-7.894	1.00 23.01 A
	ATOM	874	N	THR A 180	100.709	17.095	-7.082	1.00 24.57 A
	ATOM	875	CA	THR A 180	100.240	15.723	-6.923	1.00 25.53 A
	ATOM	876	CB	THR A 180	101.395	14.803	-6.478	1.00 24.65 A
	ATOM	877	OG1	THR A 180	102.525	15.069	-7.304	1.00 25.84 A
40	ATOM	878	CG2	THR A 180	101.021	13.334	-6.624	1.00 23.39 A
	ATOM	879	C	THR A 180	99.110	15.623	-5.902	1.00 25.85 A
	ATOM	880	O	THR A 180	98.149	14.892	-6.111	1.00 25.59 A
	ATOM	881	N	CYS A 181	99.237	16.359	-4.799	1.00 25.83 A
	ATOM	882	CA	CYS A 181	98.217	16.355	-3.752	1.00 26.26 A
45	ATOM	883	CB	CYS A 181	98.778	16.939	-2.451	1.00 27.81 A
	ATOM	884	SG	CYS A 181	100.202	16.031	-1.775	1.00 32.72 A
	ATOM	885	C	CYS A 181	96.963	17.127	-4.169	1.00 25.20 A
	ATOM	886	O	CYS A 181	95.853	16.696	-3.878	1.00 26.19 A
	ATOM	887	N	THR A 182	97.139	18.262	-4.841	1.00 22.94 A
50	ATOM	888	CA	THR A 182	96.002	19.046	-5.305	1.00 21.82 A
	ATOM	889	CB	THR A 182	96.453	20.308	-6.103	1.00 21.81 A
	ATOM	890	OG1	THR A 182	97.258	21.161	-5.276	1.00 24.55 A
	ATOM	891	CG2	THR A 182	95.252	21.080	-6.593	1.00 18.62 A
	ATOM	892	C	THR A 182	95.197	18.141	-6.249	1.00 23.45 A
55	ATOM	893	O	THR A 182	93.975	17.997	-6.115	1.00 22.94 A
	ATOM	894	N	ARG A 183	95.897	17.528	-7.202	1.00 22.71 A
	ATOM	895	CA	ARG A 183	95.260	16.648	-8.158	1.00 23.26 A
	ATOM	896	CB	ARG A 183	96.285	16.118	-9.171	1.00 22.46 A
	ATOM	897	CG	ARG A 183	95.692	15.140	-10.184	1.00 24.96 A

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      ATOM   898   CD    ARG A 183      96.762  14.512 -11.078   1.00 27.09 A
      ATOM   899   NE    ARG A 183      97.372  15.577 -11.849   1.00 33.02 A
      ATOM   900   CZ    ARG A 183      98.637  15.948 -11.732   1.00 33.62 A
      ATOM   901   NH1   ARG A 183      99.440  15.312 -10.885   1.00 32.57 A
  5   ATOM   902   NH2   ARG A 183      99.069  17.006 -12.404   1.00 33.25 A
      ATOM   903   C     ARG A 183      94.559  15.475  -7.459   1.00 22.42 A
      ATOM   904   O     ARG A 183      93.393  15.193  -7.721   1.00 21.37 A
      ATOM   905   N     PHE A 184      95.255  14.800  -6.562   1.00 21.19 A
      ATOM   906   CA    PHE A 184      94.630  13.673  -5.888   1.00 22.20 A
 10   ATOM   907   CB    PHE A 184      95.615  12.964  -4.966   1.00 23.58 A
      ATOM   908   CG    PHE A 184      95.029  11.766  -4.283   1.00 25.43 A
      ATOM   909   CD1   PHE A 184      94.916  10.556  -4.954   1.00 25.01 A
      ATOM   910   CD2   PHE A 184      94.508  11.867  -2.998   1.00 24.35 A
      ATOM   911   CE1   PHE A 184      94.285   9.460  -4.356   1.00 23.50 A
 15   ATOM   912   CE2   PHE A 184      93.881  10.782  -2.409   1.00 24.71 A
      ATOM   913   CZ    PHE A 184      93.771   9.577  -3.094   1.00 22.95 A
      ATOM   914   C     PHE A 184      93.405  14.074  -5.072   1.00 21.96 A
      ATOM   915   O     PHE A 184      92.348  13.450  -5.170   1.00 21.31 A
      ATOM   916   N     TYR A 185      93.544  15.116  -4.267   1.00 21.18 A
 20   ATOM   917   CA    TYR A 185      92.433  15.543  -3.445   1.00 20.50 A
      ATOM   918   CB    TYR A 185      92.956  16.425  -2.313   1.00 21.33 A
      ATOM   919   CG    TYR A 185      93.494  15.550  -1.190   1.00 22.24 A
      ATOM   920   CD1   TYR A 185      92.641  14.670  -0.507   1.00 21.55 A
      ATOM   921   CE1   TYR A 185      93.127  13.755   0.414   1.00 20.71 A
 25   ATOM   922   CD2   TYR A 185      94.853  15.497  -0.904   1.00 21.37 A
      ATOM   923   CE2   TYR A 185      95.353  14.579   0.019   1.00 21.80 A
      ATOM   924   CZ    TYR A 185      94.486  13.705   0.670   1.00 21.18 A
      ATOM   925   OH    TYR A 185      94.986  12.746   1.519   1.00 19.84 A
      ATOM   926   C     TYR A 185      91.273  16.182  -4.201   1.00 19.27 A
 30   ATOM   927   O     TYR A 185      90.112  16.056  -3.801   1.00 17.72 A
      ATOM   928   N     THR A 186      91.576  16.834  -5.314   1.00 17.25 A
      ATOM   929   CA    THR A 186      90.527  17.433  -6.110   1.00 15.61 A
      ATOM   930   CB    THR A 186      91.097  18.366  -7.188   1.00 15.69 A
      ATOM   931   OG1   THR A 186      91.710  19.508  -6.564   1.00 16.11 A
 35   ATOM   932   CG2   THR A 186      89.996  18.816  -8.135   1.00 12.68 A
      ATOM   933   C     THR A 186      89.756  16.302  -6.785   1.00 15.75 A
      ATOM   934   O     THR A 186      88.523  16.350  -6.899   1.00 16.51 A
      ATOM   935   N     ALA A 187      90.478  15.277  -7.218   1.00 14.94 A
      ATOM   936   CA    ALA A 187      89.841  14.136  -7.868   1.00 16.15 A
 40   ATOM   937   CB    ALA A 187      90.905  13.130  -8.382   1.00 13.30 A
      ATOM   938   C     ALA A 187      88.847  13.450  -6.911   1.00 16.71 A
      ATOM   939   O     ALA A 187      87.743  13.075  -7.328   1.00 16.50 A
      ATOM   940   N     GLU A 188      89.213  13.308  -5.635   1.00 17.02 A
      ATOM   941   CA    GLU A 188      88.302  12.673  -4.679   1.00 17.85 A
 45   ATOM   942   CB    GLU A 188      88.953  12.514  -3.302   1.00 18.83 A
      ATOM   943   CG    GLU A 188      90.219  11.665  -3.296   1.00 19.46 A
      ATOM   944   CD    GLU A 188      90.370  10.795  -2.050   1.00 20.84 A
      ATOM   945   OE1   GLU A 188      90.131  11.276  -0.920   1.00 21.14 A
      ATOM   946   OE2   GLU A 188      90.749   9.616  -2.207   1.00 23.35 A
 50   ATOM   947   C     GLU A 188      87.043  13.516  -4.551   1.00 17.79 A
      ATOM   948   O     GLU A 188      85.921  13.005  -4.579   1.00 18.83 A
      ATOM   949   N     ILE A 189      87.220  14.824  -4.449   1.00 17.09 A
      ATOM   950   CA    ILE A 189      86.060  15.688  -4.312   1.00 15.61 A
      ATOM   951   CB    ILE A 189      86.495  17.141  -4.054   1.00 15.83 A
 55   ATOM   952   CG2   ILE A 189      85.278  18.019  -3.853   1.00 14.16 A
      ATOM   953   CG1   ILE A 189      87.380  17.199  -2.794   1.00 17.34 A
      ATOM   954   CD1   ILE A 189      87.949  18.583  -2.479   1.00 15.37 A
      ATOM   955   C     ILE A 189      85.176  15.611  -5.558   1.00 16.00 A
      ATOM   956   O     ILE A 189      83.953  15.530  -5.460   1.00 15.52 A
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      ATOM    957  N    VAL A 190      85.794  15.619  -6.733  1.00 15.46 A
      ATOM    958  CA   VAL A 190      85.031  15.570  -7.964  1.00 15.38 A
      ATOM    959  CB   VAL A 190      85.975  15.641  -9.181  1.00 15.37 A
      ATOM    960  CG1  VAL A 190      85.273  15.168 -10.447  1.00 14.43 A
    5 ATOM    961  CG2  VAL A 190      86.454  17.056  -9.350  1.00 14.03 A
      ATOM    962  C    VAL A 190      84.228  14.279  -7.987  1.00 17.35 A
      ATOM    963  O    VAL A 190      83.016  14.281  -8.258  1.00 15.96 A
      ATOM    964  N    SER A 191      84.916  13.182  -7.683  1.00 17.90 A
      ATOM    965  CA   SER A 191      84.305  11.858  -7.660  1.00 17.77 A
   10 ATOM    966  CB   SER A 191      85.377  10.811  -7.344  1.00 18.25 A
      ATOM    967  OG   SER A 191      84.801   9.523  -7.243  1.00 21.13 A
      ATOM    968  C    SER A 191      83.147  11.778  -6.640  1.00 17.28 A
      ATOM    969  O    SER A 191      82.153  11.095  -6.865  1.00 15.44 A
      ATOM    970  N    ALA A 192      83.291  12.490  -5.525  1.00 17.27 A
   15 ATOM    971  CA   ALA A 192      82.267  12.529  -4.485  1.00 15.98 A
      ATOM    972  CB   ALA A 192      82.834  13.164  -3.191  1.00 14.89 A
      ATOM    973  C    ALA A 192      81.078  13.336  -4.988  1.00 16.44 A
      ATOM    974  O    ALA A 192      79.934  12.922  -4.816  1.00 17.59 A
      ATOM    975  N    LEU A 193      81.340  14.487  -5.609  1.00 16.63 A
   20 ATOM    976  CA   LEU A 193      80.253  15.303  -6.140  1.00 16.11 A
      ATOM    977  CB   LEU A 193      80.769  16.632  -6.688  1.00 16.40 A
      ATOM    978  CG   LEU A 193      81.421  17.545  -5.645  1.00 18.83 A
      ATOM    979  CD1  LEU A 193      81.779  18.885  -6.276  1.00 18.24 A
      ATOM    980  CD2  LEU A 193      80.455  17.751  -4.479  1.00 18.63 A
   25 ATOM    981  C    LEU A 193      79.509  14.551  -7.236  1.00 16.95 A
      ATOM    982  O    LEU A 193      78.286  14.623  -7.325  1.00 18.76 A
      ATOM    983  N    GLU A 194      80.229  13.825  -8.079  1.00 17.87 A
      ATOM    984  CA   GLU A 194      79.539  13.082  -9.124  1.00 19.66 A
      ATOM    985  CB   GLU A 194      80.525  12.295  -9.990  1.00 21.82 A
   30 ATOM    986  CG   GLU A 194      79.844  11.333 -10.947  1.00 21.12 A
      ATOM    987  CD   GLU A 194      80.831  10.513 -11.758  1.00 25.70 A
      ATOM    988  OE1  GLU A 194      81.900  10.122 -11.216  1.00 27.41 A
      ATOM    989  OE2  GLU A 194      80.527  10.244 -12.939  1.00 26.12 A
      ATOM    990  C    GLU A 194      78.546  12.123  -8.479  1.00 19.58 A
   35 ATOM    991  O    GLU A 194      77.420  11.987  -8.937  1.00 17.78 A
      ATOM    992  N    TYR A 195      78.962  11.462  -7.406  1.00 19.09 A
      ATOM    993  CA   TYR A 195      78.063  10.545  -6.736  1.00 19.86 A
      ATOM    994  CB   TYR A 195      78.807   9.740  -5.673  1.00 20.01 A
      ATOM    995  CG   TYR A 195      77.871   8.975  -4.756  1.00 20.45 A
   40 ATOM    996  CD1  TYR A 195      77.329   7.748  -5.142  1.00 19.40 A
      ATOM    997  CE1  TYR A 195      76.471   7.044  -4.296  1.00 18.43 A
      ATOM    998  CD2  TYR A 195      77.527   9.482  -3.500  1.00 20.11 A
      ATOM    999  CE2  TYR A 195      76.678   8.792  -2.652  1.00 19.96 A
      ATOM   1000  CZ   TYR A 195      76.154   7.567  -3.057  1.00 21.07 A
   45 ATOM   1001  OH   TYR A 195      75.336   6.859  -2.206  1.00 21.31 A
      ATOM   1002  C    TYR A 195      76.914  11.295  -6.060  1.00 20.00 A
      ATOM   1003  O    TYR A 195      75.775  10.823  -6.033  1.00 21.42 A
      ATOM   1004  N    LEU A 196      77.222  12.455  -5.500  1.00 17.38 A
      ATOM   1005  CA   LEU A 196      76.209  13.226  -4.795  1.00 18.74 A
   50 ATOM   1006  CB   LEU A 196      76.846  14.412  -4.049  1.00 17.38 A
      ATOM   1007  CG   LEU A 196      75.850  15.100  -3.110  1.00 19.04 A
      ATOM   1008  CD1  LEU A 196      75.423  14.093  -2.061  1.00 17.66 A
      ATOM   1009  CD2  LEU A 196      76.462  16.338  -2.453  1.00 19.96 A
      ATOM   1010  C    LEU A 196      75.148  13.747  -5.751  1.00 18.47 A
   55 ATOM   1011  O    LEU A 196      73.944  13.608  -5.523  1.00 15.05 A
      ATOM   1012  N    HIS A 197      75.622  14.361  -6.824  1.00 18.35 A
      ATOM   1013  CA   HIS A 197      74.740  14.915  -7.812  1.00 20.04 A
      ATOM   1014  CB   HIS A 197      75.562  15.809  -8.718  1.00 20.29 A
      ATOM   1015  CG   HIS A 197      76.048  17.044  -8.025  1.00 21.90 A
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     ATOM  1016  CD2 HIS A 197    75.766  17.539  -6.794  1.00 19.49 A
     ATOM  1017  ND1 HIS A 197    76.892  17.956  -8.621  1.00 20.69 A
     ATOM  1018  CE1 HIS A 197    77.104  18.960  -7.789  1.00 20.86 A
     ATOM  1019  NE2 HIS A 197    76.433  18.732  -6.676  1.00 19.12 A
  5  ATOM  1020  C   HIS A 197    73.950  13.858  -8.587  1.00 21.27 A
     ATOM  1021  O   HIS A 197    72.865  14.133  -9.099  1.00 21.23 A
     ATOM  1022  N   GLY A 198    74.487  12.644  -8.644  1.00 21.36 A
     ATOM  1023  CA  GLY A 198    73.810  11.569  -9.339  1.00 20.60 A
     ATOM  1024  C   GLY A 198    72.528  11.203  -8.632  1.00 22.72 A
 10  ATOM  1025  O   GLY A 198    71.593  10.742  -9.269  1.00 22.75 A
     ATOM  1026  N   LYS A 199    72.478  11.411  -7.313  1.00 24.27 A
     ATOM  1027  CA  LYS A 199    71.280  11.105  -6.523  1.00 22.95 A
     ATOM  1028  CB  LYS A 199    71.659  10.629  -5.123  1.00 24.67 A
     ATOM  1029  CG  LYS A 199    72.570   9.429  -5.109  1.00 29.22 A
 15  ATOM  1030  CD  LYS A 199    72.986   9.064  -3.701  1.00 33.11 A
     ATOM  1031  CE  LYS A 199    72.531   7.660  -3.366  1.00 37.28 A
     ATOM  1032  NZ  LYS A 199    72.917   6.886  -4.455  1.00 38.82 A
     ATOM  1033  C   LYS A 199    70.432  12.354  -6.398  1.00 22.39 A
     ATOM  1034  O   LYS A 199    69.558  12.431  -5.542  1.00 22.53 A
 20  ATOM  1035  N   GLY A 200    70.710  13.343  -7.241  1.00 21.56 A
     ATOM  1036  CA  GLY A 200    69.953  14.580  -7.203  1.00 22.28 A
     ATOM  1037  C   GLY A 200    70.006  15.326  -5.882  1.00 23.53 A
     ATOM  1038  O   GLY A 200    69.017  15.930  -5.461  1.00 24.83 A
     ATOM  1039  N   ILE A 201    71.161  15.302  -5.225  1.00 22.74 A
 25  ATOM  1040  CA  ILE A 201    71.314  15.985  -3.951  1.00 22.95 A
     ATOM  1041  CB  ILE A 201    71.796  15.007  -2.842  1.00 22.51 A
     ATOM  1042  CG2 ILE A 201    71.995  15.757  -1.536  1.00 21.73 A
     ATOM  1043  CG1 ILE A 201    70.788  13.876  -2.638  1.00 22.48 A
     ATOM  1044  CD1 ILE A 201    71.274  12.791  -1.687  1.00 17.26 A
 30  ATOM  1045  C   ILE A 201    72.361  17.086  -4.076  1.00 24.41 A
     ATOM  1046  O   ILE A 201    73.387  16.904  -4.737  1.00 26.41 A
     ATOM  1047  N   ILE A 202    72.118  18.236  -3.470  1.00 23.00 A
     ATOM  1048  CA  ILE A 202    73.137  19.267  -3.520  1.00 24.60 A
     ATOM  1049  CB  ILE A 202    72.729  20.440  -4.420  1.00 26.37 A
 35  ATOM  1050  CG2 ILE A 202    72.503  19.934  -5.829  1.00 28.52 A
     ATOM  1051  CG1 ILE A 202    71.450  21.086  -3.922  1.00 29.04 A
     ATOM  1052  CD1 ILE A 202    70.958  22.165  -4.845  1.00 32.55 A
     ATOM  1053  C   ILE A 202    73.482  19.732  -2.105  1.00 24.36 A
     ATOM  1054  O   ILE A 202    72.605  19.919  -1.257  1.00 25.89 A
 40  ATOM  1055  N   HIS A 203    74.776  19.882  -1.856  1.00 22.94 A
     ATOM  1056  CA  HIS A 203    75.289  20.273  -0.555  1.00 22.27 A
     ATOM  1057  CB  HIS A 203    76.800  20.010  -0.526  1.00 20.00 A
     ATOM  1058  CG  HIS A 203    77.401  20.051   0.840  1.00 18.45 A
     ATOM  1059  CD2 HIS A 203    77.865  19.060   1.640  1.00 19.77 A
 45  ATOM  1060  ND1 HIS A 203    77.569  21.222   1.542  1.00 16.33 A
     ATOM  1061  CE1 HIS A 203    78.115  20.953   2.715  1.00 17.77 A
     ATOM  1062  NE2 HIS A 203    78.306  19.650   2.800  1.00 18.48 A
     ATOM  1063  C   HIS A 203    74.978  21.731  -0.206  1.00 23.37 A
     ATOM  1064  O   HIS A 203    74.411  22.009   0.860  1.00 22.52 A
 50  ATOM  1065  N   ARG A 204    75.361  22.648  -1.101  1.00 23.22 A
     ATOM  1066  CA  ARG A 204    75.126  24.087  -0.934  1.00 23.42 A
     ATOM  1067  CB  ARG A 204    73.674  24.375  -0.544  1.00 22.74 A
     ATOM  1068  CG  ARG A 204    72.663  23.966  -1.561  1.00 24.57 A
     ATOM  1069  CD  ARG A 204    71.341  24.681  -1.325  1.00 26.51 A
 55  ATOM  1070  NE  ARG A 204    70.699  24.299  -0.074  1.00 28.25 A
     ATOM  1071  CZ  ARG A 204    69.596  24.871   0.405  1.00 28.63 A
     ATOM  1072  NH1 ARG A 204    69.013  25.849  -0.267  1.00 28.47 A
     ATOM  1073  NH2 ARG A 204    69.086  24.472   1.563  1.00 28.55 A
     ATOM  1074  C   ARG A 204    76.017  24.819   0.061  1.00 24.12 A
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      ATOM    1075  O     ARG A 204      75.805  26.001   0.308  1.00 26.26 A
      ATOM    1076  N     ASP A 205      76.990  24.135   0.654  1.00 23.05 A
      ATOM    1077  CA    ASP A 205      77.887  24.789   1.595  1.00 20.96 A
      ATOM    1078  CB    ASP A 205      77.219  24.883   2.964  1.00 22.31 A
 5    ATOM    1079  CG    ASP A 205      77.964  25.801   3.914  1.00 26.08 A
      ATOM    1080  OD1   ASP A 205      78.812  26.582   3.439  1.00 25.93 A
      ATOM    1081  OD2   ASP A 205      77.707  25.751   5.141  1.00 29.89 A
      ATOM    1082  C     ASP A 205      79.210  24.020   1.662  1.00 20.46 A
      ATOM    1083  O     ASP A 205      79.812  23.833   2.716  1.00 21.36 A
10    ATOM    1084  N     LEU A 206      79.666  23.584   0.504  1.00 18.98 A
      ATOM    1085  CA    LEU A 206      80.893  22.827   0.407  1.00 19.83 A
      ATOM    1086  CB    LEU A 206      80.983  22.229  -0.994  1.00 21.73 A
      ATOM    1087  CG    LEU A 206      82.039  21.167  -1.298  1.00 24.76 A
      ATOM    1088  CD1   LEU A 206      81.818  19.943  -0.401  1.00 24.95 A
15    ATOM    1089  CD2   LEU A 206      81.941  20.789  -2.778  1.00 23.74 A
      ATOM    1090  C     LEU A 206      82.093  23.725   0.691  1.00 20.17 A
      ATOM    1091  O     LEU A 206      82.162  24.857   0.200  1.00 20.92 A
      ATOM    1092  N     LYS A 207      83.044  23.226   1.475  1.00 19.79 A
      ATOM    1093  CA    LYS A 207      84.233  24.004   1.821  1.00 19.45 A
20    ATOM    1094  CB    LYS A 207      83.825  25.209   2.667  1.00 17.84 A
      ATOM    1095  CG    LYS A 207      83.123  24.820   3.933  1.00 19.19 A
      ATOM    1096  CD    LYS A 207      82.331  25.969   4.500  1.00 20.50 A
      ATOM    1097  CE    LYS A 207      81.663  25.556   5.797  1.00 22.10 A
      ATOM    1098  NZ    LYS A 207      80.955  26.674   6.480  1.00 22.34 A
25    ATOM    1099  C     LYS A 207      85.241  23.130   2.565  1.00 19.59 A
      ATOM    1100  O     LYS A 207      84.917  22.025   2.985  1.00 20.21 A
      ATOM    1101  N     PRO A 208      86.480  23.618   2.737  1.00 19.79 A
      ATOM    1102  CD    PRO A 208      87.032  24.869   2.188  1.00 18.04 A
      ATOM    1103  CA    PRO A 208      87.526  22.853   3.428  1.00 19.22 A
30    ATOM    1104  CB    PRO A 208      88.756  23.763   3.297  1.00 19.27 A
      ATOM    1105  CG    PRO A 208      88.496  24.521   2.027  1.00 16.27 A
      ATOM    1106  C     PRO A 208      87.221  22.477   4.883  1.00 20.50 A
      ATOM    1107  O     PRO A 208      87.791  21.511   5.411  1.00 21.44 A
      ATOM    1108  N     GLU A 209      86.335  23.231   5.530  1.00 20.19 A
35    ATOM    1109  CA    GLU A 209      85.956  22.976   6.927  1.00 21.25 A
      ATOM    1110  CB    GLU A 209      85.383  24.251   7.562  1.00 21.43 A
      ATOM    1111  CG    GLU A 209      86.330  25.446   7.535  1.00 26.33 A
      ATOM    1112  CD    GLU A 209      86.203  26.315   6.270  1.00 30.17 A
      ATOM    1113  OE1   GLU A 209      86.143  25.785   5.131  1.00 30.44 A
40    ATOM    1114  OE2   GLU A 209      86.173  27.557   6.422  1.00 33.49 A
      ATOM    1115  C     GLU A 209      84.920  21.839   7.040  1.00 22.45 A
      ATOM    1116  O     GLU A 209      84.733  21.255   8.114  1.00 21.98 A
      ATOM    1117  N     ASN A 210      84.269  21.545   5.915  1.00 22.73 A
      ATOM    1118  CA    ASN A 210      83.234  20.514   5.788  1.00 23.66 A
45    ATOM    1119  CB    ASN A 210      82.102  21.013   4.882  1.00 26.67 A
      ATOM    1120  CG    ASN A 210      81.104  21.881   5.613  1.00 33.39 A
      ATOM    1121  OD1   ASN A 210      80.223  22.481   4.988  1.00 36.52 A
      ATOM    1122  ND2   ASN A 210      81.221  21.950   6.946  1.00 34.23 A
      ATOM    1123  C     ASN A 210      83.775  19.239   5.162  1.00 21.41 A
50    ATOM    1124  O     ASN A 210      83.067  18.244   5.081  1.00 21.16 A
      ATOM    1125  N     ILE A 211      85.006  19.293   4.674  1.00 19.42 A
      ATOM    1126  CA    ILE A 211      85.619  18.141   4.029  1.00 17.43 A
      ATOM    1127  CB    ILE A 211      86.319  18.556   2.708  1.00 14.89 A
      ATOM    1128  CG2   ILE A 211      87.046  17.349   2.096  1.00 12.68 A
55    ATOM    1129  CG1   ILE A 211      85.277  19.157   1.736  1.00 13.30 A
      ATOM    1130  CD1   ILE A 211      85.855  19.805   0.435  1.00 10.47 A
      ATOM    1131  C     ILE A 211      86.620  17.578   5.024  1.00 17.83 A
      ATOM    1132  O     ILE A 211      87.685  18.151   5.241  1.00 17.76 A
      ATOM    1133  N     LEU A 212      86.265  16.457   5.639  1.00 16.05 A
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ATOM	1134	CA	LEU	A	212	87.121	15.871	6.656	1.00 15.84 A
ATOM	1135	CB	LEU	A	212	86.256	15.319	7.793	1.00 14.28 A
ATOM	1136	CG	LEU	A	212	85.108	16.227	8.285	1.00 14.68 A
ATOM	1137	CD1	LEU	A	212	84.606	15.715	9.647	1.00 11.38 A
ATOM	1138	CD2	LEU	A	212	85.579	17.685	8.422	1.00 10.88 A
ATOM	1139	C	LEU	A	212	88.031	14.787	6.114	1.00 16.77 A
ATOM	1140	O	LEU	A	212	87.861	14.335	4.984	1.00 16.78 A
ATOM	1141	N	LEU	A	213	88.999	14.374	6.925	1.00 17.68 A
ATOM	1142	CA	LEU	A	213	89.924	13.332	6.516	1.00 17.64 A
ATOM	1143	CB	LEU	A	213	91.323	13.926	6.378	1.00 18.08 A
ATOM	1144	CG	LEU	A	213	91.367	14.880	5.176	1.00 17.92 A
ATOM	1145	CD1	LEU	A	213	92.076	16.134	5.529	1.00 18.78 A
ATOM	1146	CD2	LEU	A	213	92.042	14.187	4.000	1.00 17.07 A
ATOM	1147	C	LEU	A	213	89.919	12.147	7.473	1.00 18.68 A
ATOM	1148	O	LEU	A	213	90.091	12.297	8.672	1.00 18.75 A
ATOM	1149	N	ASN	A	214	89.712	10.955	6.939	1.00 21.19 A
ATOM	1150	CA	ASN	A	214	89.673	9.780	7.797	1.00 23.68 A
ATOM	1151	CB	ASN	A	214	88.864	8.657	7.122	1.00 25.68 A
ATOM	1152	CG	ASN	A	214	89.613	7.979	6.012	1.00 31.70 A
ATOM	1153	OD1	ASN	A	214	90.680	8.426	5.590	1.00 35.54 A
ATOM	1154	ND2	ASN	A	214	89.057	6.886	5.521	1.00 34.56 A
ATOM	1155	C	ASN	A	214	91.077	9.328	8.203	1.00 22.08 A
ATOM	1156	O	ASN	A	214	92.056	9.972	7.864	1.00 20.25 A
ATOM	1157	N	ALA	A	215	91.170	8.239	8.953	1.00 24.03 A
ATOM	1158	CA	ALA	A	215	92.464	7.738	9.420	1.00 24.26 A
ATOM	1159	CB	ALA	A	215	92.276	6.502	10.277	1.00 21.70 A
ATOM	1160	C	ALA	A	215	93.421	7.426	8.296	1.00 24.90 A
ATOM	1161	O	ALA	A	215	94.615	7.435	8.491	1.00 25.93 A
ATOM	1162	N	ASP	A	216	92.889	7.143	7.108	1.00 25.93 A
ATOM	1163	CA	ASP	A	216	93.726	6.826	5.963	1.00 29.24 A
ATOM	1164	CB	ASP	A	216	93.048	5.773	5.091	1.00 32.31 A
ATOM	1165	CG	ASP	A	216	92.862	4.456	5.812	1.00 38.06 A
ATOM	1166	OD1	ASP	A	216	93.780	4.043	6.559	1.00 40.03 A
ATOM	1167	OD2	ASP	A	216	91.800	3.823	5.616	1.00 42.79 A
ATOM	1168	C	ASP	A	216	94.046	8.026	5.095	1.00 23.69 A
ATOM	1169	O	ASP	A	216	94.717	7.899	4.085	1.00 24.38 A
ATOM	1170	N	MET	A	217	93.546	9.187	5.478	1.00 21.45 A
ATOM	1171	CA	MET	A	217	93.752	10.418	4.726	1.00 20.48 A
ATOM	1172	CB	MET	A	217	95.226	10.614	4.396	1.00 21.48 A
ATOM	1173	CG	MET	A	217	96.081	10.894	5.629	1.00 21.46 A
ATOM	1174	SD	MET	A	217	95.504	12.311	6.580	1.00 25.32 A
ATOM	1175	CE	MET	A	217	96.079	13.722	5.573	1.00 24.08 A
ATOM	1176	C	MET	A	217	92.900	10.556	3.458	1.00 19.63 A
ATOM	1177	O	MET	A	217	93.245	11.294	2.546	1.00 19.54 A
ATOM	1178	N	HIS	A	218	91.794	9.824	3.405	1.00 18.82 A
ATOM	1179	CA	HIS	A	218	90.843	9.945	2.311	1.00 18.81 A
ATOM	1180	CB	HIS	A	218	90.206	8.589	1.994	1.00 20.61 A
ATOM	1181	CG	HIS	A	218	91.097	7.666	1.218	1.00 22.68 A
ATOM	1182	CD2	HIS	A	218	91.840	6.605	1.614	1.00 20.37 A
ATOM	1183	ND1	HIS	A	218	91.316	7.806	-0.139	1.00 21.30 A
ATOM	1184	CE1	HIS	A	218	92.153	6.867	-0.541	1.00 21.70 A
ATOM	1185	NE2	HIS	A	218	92.485	6.128	0.501	1.00 20.31 A
ATOM	1186	C	HIS	A	218	89.774	10.925	2.863	1.00 18.97 A
ATOM	1187	O	HIS	A	218	89.534	10.965	4.083	1.00 16.48 A
ATOM	1188	N	ILE	A	219	89.166	11.721	1.978	1.00 17.41 A
ATOM	1189	CA	ILE	A	219	88.165	12.702	2.387	1.00 16.48 A
ATOM	1190	CB	ILE	A	219	87.765	13.695	1.242	1.00 13.43 A
ATOM	1191	CG2	ILE	A	219	88.984	14.404	0.698	1.00 10.66 A
ATOM	1192	CG1	ILE	A	219	86.973	12.952	0.156	1.00 11.14 A

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      ATOM   1193   CD1 ILE A 219      86.505  13.807  -0.995  1.00   4.26 A
      ATOM   1194   C   ILE A 219      86.875  12.067   2.864  1.00  17.14 A
      ATOM   1195   O   ILE A 219      86.541  10.943   2.497  1.00  18.77 A
      ATOM   1196   N   GLN A 220      86.159  12.808   3.696  1.00  17.24 A
 5    ATOM   1197   CA  GLN A 220      84.878  12.376   4.203  1.00  18.93 A
      ATOM   1198   CB  GLN A 220      85.002  11.756   5.604  1.00  22.02 A
      ATOM   1199   CG  GLN A 220      83.791  10.874   5.952  1.00  26.68 A
      ATOM   1200   CD  GLN A 220      83.949  10.071   7.253  1.00  31.76 A
      ATOM   1201   OE1 GLN A 220      83.437  10.471   8.331  1.00  27.57 A
10    ATOM   1202   NE2 GLN A 220      84.667   8.930   7.161  1.00  29.97 A
      ATOM   1203   C   GLN A 220      84.077  13.652   4.261  1.00  17.44 A
      ATOM   1204   O   GLN A 220      84.247  14.465   5.170  1.00  17.81 A
      ATOM   1205   N   ILE A 221      83.229  13.852   3.263  1.00  15.69 A
      ATOM   1206   CA  ILE A 221      82.413  15.051   3.230  1.00  16.08 A
15    ATOM   1207   CB  ILE A 221      81.939  15.359   1.802  1.00  15.82 A
      ATOM   1208   CG2 ILE A 221      80.956  16.519   1.834  1.00  13.95 A
      ATOM   1209   CG1 ILE A 221      83.163  15.627   0.899  1.00  16.66 A
      ATOM   1210   CD1 ILE A 221      82.837  16.045  -0.548  1.00  13.13 A
      ATOM   1211   C   ILE A 221      81.207  14.892   4.156  1.00  16.52 A
20    ATOM   1212   O   ILE A 221      80.542  13.860   4.157  1.00  16.03 A
      ATOM   1213   N   THR A 222      80.927  15.922   4.948  1.00  17.66 A
      ATOM   1214   CA  THR A 222      79.810  15.862   5.882  1.00  17.70 A
      ATOM   1215   CB  THR A 222      80.331  15.433   7.277  1.00  18.71 A
      ATOM   1216   OG1 THR A 222      79.230  15.263   8.172  1.00  16.76 A
25    ATOM   1217   CG2 THR A 222      81.319  16.470   7.825  1.00  16.79 A
      ATOM   1218   C   THR A 222      79.069  17.195   5.980  1.00  17.35 A
      ATOM   1219   O   THR A 222      79.246  18.062   5.130  1.00  16.83 A
      ATOM   1220   N   ASP A 223      78.244  17.344   7.018  1.00  18.09 A
      ATOM   1221   CA  ASP A 223      77.466  18.567   7.268  1.00  19.60 A
30    ATOM   1222   CB  ASP A 223      78.403  19.778   7.311  1.00  22.73 A
      ATOM   1223   CG  ASP A 223      77.763  21.006   7.959  1.00  28.30 A
      ATOM   1224   OD1 ASP A 223      76.565  20.931   8.335  1.00  28.17 A
      ATOM   1225   OD2 ASP A 223      78.480  22.042   8.081  1.00  30.99 A
      ATOM   1226   C   ASP A 223      76.382  18.799   6.210  1.00  19.52 A
35    ATOM   1227   O   ASP A 223      76.528  19.655   5.340  1.00  19.39 A
      ATOM   1228   N   PHE A 224      75.283  18.058   6.303  1.00  18.74 A
      ATOM   1229   CA  PHE A 224      74.213  18.168   5.321  1.00  18.81 A
      ATOM   1230   CB  PHE A 224      73.825  16.773   4.853  1.00  17.07 A
      ATOM   1231   CG  PHE A 224      74.857  16.150   3.971  1.00  17.01 A
40    ATOM   1232   CD1 PHE A 224      74.751  16.250   2.578  1.00  16.10 A
      ATOM   1233   CD2 PHE A 224      75.982  15.543   4.521  1.00  14.00 A
      ATOM   1234   CE1 PHE A 224      75.761  15.752   1.747  1.00  15.92 A
      ATOM   1235   CE2 PHE A 224      77.001  15.042   3.699  1.00  15.63 A
      ATOM   1236   CZ  PHE A 224      76.889  15.147   2.309  1.00  15.79 A
45    ATOM   1237   C   PHE A 224      72.997  18.932   5.775  1.00  19.80 A
      ATOM   1238   O   PHE A 224      71.961  18.922   5.115  1.00  19.36 A
      ATOM   1239   N   GLY A 225      73.135  19.599   6.911  1.00  21.38 A
      ATOM   1240   CA  GLY A 225      72.046  20.388   7.439  1.00  21.39 A
      ATOM   1241   C   GLY A 225      71.672  21.545   6.523  1.00  23.43 A
50    ATOM   1242   O   GLY A 225      70.802  22.323   6.869  1.00  26.22 A
      ATOM   1243   N   THR A 226      72.311  21.692   5.370  1.00  22.15 A
      ATOM   1244   CA  THR A 226      71.930  22.784   4.492  1.00  23.85 A
      ATOM   1245   CB  THR A 226      72.986  23.946   4.465  1.00  24.76 A
      ATOM   1246   OG1 THR A 226      74.197  23.511   3.830  1.00  24.83 A
55    ATOM   1247   CG2 THR A 226      73.285  24.420   5.866  1.00  23.67 A
      ATOM   1248   C   THR A 226      71.721  22.289   3.073  1.00  24.12 A
      ATOM   1249   O   THR A 226      71.646  23.079   2.129  1.00  22.82 A
      ATOM   1250   N   ALA A 227      71.620  20.976   2.935  1.00  23.84 A
      ATOM   1251   CA  ALA A 227      71.437  20.357   1.637  1.00  26.21 A
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      ATOM  1252  CB   ALA A 227      71.774  18.889   1.734  1.00 24.04 A
      ATOM  1253  C    ALA A 227      70.026  20.535   1.064  1.00 28.20 A
      ATOM  1254  O    ALA A 227      69.069  20.767   1.801  1.00 29.29 A
      ATOM  1255  N    ALA A 228      69.912  20.449  -0.258  1.00 28.91 A
  5   ATOM  1256  CA   ALA A 228      68.623  20.554  -0.928  1.00 31.02 A
      ATOM  1257  CB   ALA A 228      68.577  21.795  -1.856  1.00 30.45 A
      ATOM  1258  C    ALA A 228      68.501  19.276  -1.745  1.00 32.01 A
      ATOM  1259  O    ALA A 228      69.474  18.846  -2.363  1.00 32.87 A
      ATOM  1260  N    VAL A 229      67.328  18.650  -1.732  1.00 32.95 A
 10   ATOM  1261  CA   VAL A 229      67.126  17.424  -2.503  1.00 34.26 A
      ATOM  1262  CB   VAL A 229      66.468  16.347  -1.657  1.00 33.02 A
      ATOM  1263  CG1  VAL A 229      66.194  15.114  -2.498  1.00 33.80 A
      ATOM  1264  CG2  VAL A 229      67.356  16.011  -0.496  1.00 31.38 A
      ATOM  1265  C    VAL A 229      66.213  17.757  -3.665  1.00 36.36 A
 15   ATOM  1266  O    VAL A 229      65.065  18.133  -3.455  1.00 38.02 A
      ATOM  1267  N    LEU A 230      66.715  17.628  -4.889  1.00 37.75 A
      ATOM  1268  CA   LEU A 230      65.917  17.965  -6.066  1.00 39.87 A
      ATOM  1269  CB   LEU A 230      66.741  17.775  -7.335  1.00 41.23 A
      ATOM  1270  CG   LEU A 230      68.039  18.585  -7.359  1.00 44.16 A
 20   ATOM  1271  CD1  LEU A 230      68.843  18.208  -8.599  1.00 43.48 A
      ATOM  1272  CD2  LEU A 230      67.724  20.087  -7.313  1.00 42.99 A
      ATOM  1273  C    LEU A 230      64.646  17.137  -6.162  1.00 40.59 A
      ATOM  1274  O    LEU A 230      64.703  15.954  -6.486  1.00 41.31 A
      ATOM  1275  N    ASN A 240      65.964  27.756  -2.248  1.00 83.97 A
 25   ATOM  1276  CA   ASN A 240      66.331  29.165  -2.370  1.00 84.48 A
      ATOM  1277  CB   ASN A 240      65.294  29.907  -3.225  1.00 85.56 A
      ATOM  1278  CG   ASN A 240      63.949  30.053  -2.524  1.00 86.59 A
      ATOM  1279  OD1  ASN A 240      63.850  30.682  -1.465  1.00 87.31 A
      ATOM  1280  ND2  ASN A 240      62.904  29.473  -3.115  1.00 86.14 A
 30   ATOM  1281  C    ASN A 240      66.433  29.828  -0.994  1.00 83.85 A
      ATOM  1282  O    ASN A 240      66.898  30.963  -0.862  1.00 84.11 A
      ATOM  1283  N    ALA A 241      65.997  29.096   0.023  1.00 83.19 A
      ATOM  1284  CA   ALA A 241      65.996  29.564   1.405  1.00 81.85 A
      ATOM  1285  C    ALA A 241      67.330  29.365   2.127  1.00 79.97 A
 35   ATOM  1286  O    ALA A 241      67.349  28.777   3.214  1.00 79.75 A
      ATOM  1287  CB   ALA A 241      64.894  28.825   2.183  1.00 85.17 A
      ATOM  1288  N    PHE A 242      68.433  29.850   1.551  1.00 77.03 A
      ATOM  1289  CA   PHE A 242      69.737  29.680   2.197  1.00 74.85 A
      ATOM  1290  CB   PHE A 242      69.973  28.183   2.438  1.00 73.81 A
 40   ATOM  1291  CG   PHE A 242      71.311  27.861   3.015  1.00 72.36 A
      ATOM  1292  CD1  PHE A 242      71.595  28.116   4.353  1.00 72.39 A
      ATOM  1293  CD2  PHE A 242      72.297  27.312   2.210  1.00 72.03 A
      ATOM  1294  CE1  PHE A 242      72.855  27.823   4.879  1.00 72.12 A
      ATOM  1295  CE2  PHE A 242      73.553  27.016   2.714  1.00 72.25 A
 45   ATOM  1296  CZ   PHE A 242      73.837  27.270   4.054  1.00 72.96 A
      ATOM  1297  C    PHE A 242      70.951  30.283   1.462  1.00 73.13 A
      ATOM  1298  O    PHE A 242      70.958  30.425   0.233  1.00 74.08 A
      ATOM  1299  N    VAL A 243      71.972  30.625   2.250  1.00 69.64 A
      ATOM  1300  CA   VAL A 243      73.233  31.204   1.777  1.00 65.87 A
 50   ATOM  1301  CB   VAL A 243      73.207  32.765   1.834  1.00 66.73 A
      ATOM  1302  CG1  VAL A 243      74.498  33.344   1.271  1.00 65.65 A
      ATOM  1303  CG2  VAL A 243      72.008  33.299   1.084  1.00 66.83 A
      ATOM  1304  C    VAL A 243      74.349  30.708   2.703  1.00 62.83 A
      ATOM  1305  O    VAL A 243      74.471  31.189   3.839  1.00 61.91 A
 55   ATOM  1306  N    GLY A 244      75.149  29.760   2.204  1.00 57.62 A
      ATOM  1307  CA   GLY A 244      76.247  29.177   2.967  1.00 51.60 A
      ATOM  1308  C    GLY A 244      77.341  30.132   3.387  1.00 46.47 A
      ATOM  1309  O    GLY A 244      77.063  31.261   3.757  1.00 48.62 A
      ATOM  1310  N    THR A 245      78.588  29.686   3.325  1.00 42.06 A
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      ATOM   1311   CA    THR A 245      79.709  30.526   3.726  1.00 36.35 A
      ATOM   1312   CB    THR A 245      80.925  29.673   4.096  1.00 35.76 A
      ATOM   1313   OG1   THR A 245      80.539  28.740   5.105  1.00 31.66 A
      ATOM   1314   CG2   THR A 245      82.043  30.534   4.651  1.00 33.72 A
  5   ATOM   1315   C     THR A 245      80.064  31.524   2.637  1.00 34.43 A
      ATOM   1316   O     THR A 245      80.309  31.166   1.485  1.00 33.95 A
      ATOM   1317   N     ALA A 246      80.087  32.787   3.034  1.00 32.72 A
      ATOM   1318   CA    ALA A 246      80.338  33.900   2.142  1.00 30.18 A
      ATOM   1319   CB    ALA A 246      80.684  35.127   2.952  1.00 30.18 A
 10   ATOM   1320   C     ALA A 246      81.374  33.678   1.062  1.00 29.56 A
      ATOM   1321   O     ALA A 246      81.099  33.895  -0.113  1.00 30.00 A
      ATOM   1322   N     GLN A 247      82.564  33.242   1.445  1.00 28.03 A
      ATOM   1323   CA    GLN A 247      83.623  33.030   0.468  1.00 26.97 A
      ATOM   1324   CB    GLN A 247      84.929  32.706   1.182  1.00 28.32 A
 15   ATOM   1325   CG    GLN A 247      85.208  33.659   2.319  1.00 33.33 A
      ATOM   1326   CD    GLN A 247      86.600  33.522   2.863  1.00 36.16 A
      ATOM   1327   OE1   GLN A 247      87.556  34.107   2.335  1.00 36.68 A
      ATOM   1328   NE2   GLN A 247      86.738  32.731   3.922  1.00 39.27 A
      ATOM   1329   C     GLN A 247      83.355  31.968  -0.583  1.00 25.04 A
 20   ATOM   1330   O     GLN A 247      83.962  31.997  -1.653  1.00 25.92 A
      ATOM   1331   N     TYR A 248      82.443  31.045  -0.304  1.00 22.51 A
      ATOM   1332   CA    TYR A 248      82.161  29.970  -1.260  1.00 21.98 A
      ATOM   1333   CB    TYR A 248      82.273  28.613  -0.541  1.00 17.74 A
      ATOM   1334   CG    TYR A 248      83.626  28.444   0.117  1.00 14.83 A
 25   ATOM   1335   CD1   TYR A 248      84.736  28.063  -0.630  1.00 14.53 A
      ATOM   1336   CE1   TYR A 248      86.017  28.034  -0.067  1.00 15.65 A
      ATOM   1337   CD2   TYR A 248      83.820  28.784   1.460  1.00 13.57 A
      ATOM   1338   CE2   TYR A 248      85.086  28.757   2.039  1.00 13.28 A
      ATOM   1339   CZ    TYR A 248      86.192  28.386   1.271  1.00 16.78 A
 30   ATOM   1340   OH    TYR A 248      87.471  28.411   1.816  1.00 15.10 A
      ATOM   1341   C     TYR A 248      80.827  30.091  -2.005  1.00 22.23 A
      ATOM   1342   O     TYR A 248      80.523  29.268  -2.866  1.00 22.78 A
      ATOM   1343   N     VAL A 249      80.054  31.126  -1.680  1.00 21.81 A
 35   ATOM   1344   CA    VAL A 249      78.760  31.395  -2.308  1.00 22.22 A
      ATOM   1345   CB    VAL A 249      78.077  32.634  -1.640  1.00 22.82 A
      ATOM   1346   CG1   VAL A 249      76.904  33.139  -2.496  1.00 22.57 A
      ATOM   1347   CG2   VAL A 249      77.606  32.270  -0.243  1.00 22.62 A
      ATOM   1348   C     VAL A 249      78.878  31.666  -3.818  1.00 21.92 A
      ATOM   1349   O     VAL A 249      79.733  32.428  -4.255  1.00 20.01 A
 40   ATOM   1350   N     SER A 250      78.012  31.045  -4.609  1.00 22.88 A
      ATOM   1351   CA    SER A 250      78.030  31.259  -6.049  1.00 24.81 A
      ATOM   1352   CB    SER A 250      77.357  30.105  -6.792  1.00 25.82 A
      ATOM   1353   OG    SER A 250      75.999  29.984  -6.419  1.00 27.07 A
      ATOM   1354   C     SER A 250      77.288  32.546  -6.357  1.00 26.22 A
 45   ATOM   1355   O     SER A 250      76.438  33.004  -5.582  1.00 25.88 A
      ATOM   1356   N     PRO A 251      77.592  33.148  -7.506  1.00 26.70 A
      ATOM   1357   CD    PRO A 251      78.632  32.813  -8.495  1.00 27.24 A
      ATOM   1358   CA    PRO A 251      76.908  34.393  -7.847  1.00 27.08 A
      ATOM   1359   CB    PRO A 251      77.637  34.860  -9.113  1.00 25.51 A
 50   ATOM   1360   CG    PRO A 251      78.171  33.590  -9.701  1.00 27.43 A
      ATOM   1361   C     PRO A 251      75.399  34.288  -8.026  1.00 28.04 A
      ATOM   1362   O     PRO A 251      74.684  35.218  -7.678  1.00 28.30 A
      ATOM   1363   N     GLU A 252      74.908  33.166  -8.550  1.00 28.81 A
      ATOM   1364   CA    GLU A 252      73.469  33.012  -8.768  1.00 29.67 A
 55   ATOM   1365   CB    GLU A 252      73.151  31.684  -9.463  1.00 29.72 A
      ATOM   1366   CG    GLU A 252      73.698  30.453  -8.740  1.00 31.04 A
      ATOM   1367   CD    GLU A 252      75.106  30.075  -9.191  1.00 30.61 A
      ATOM   1368   OE1   GLU A 252      75.880  30.973  -9.597  1.00 30.55 A
      ATOM   1369   OE2   GLU A 252      75.434  28.872  -9.130  1.00 30.80 A
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ATOM   1370  C   GLU A 252      72.709  33.083  -7.462  1.00 30.83 A
ATOM   1371  O   GLU A 252      71.563  33.530  -7.423  1.00 31.87 A
ATOM   1372  N   LEU A 253      73.351  32.639  -6.388  1.00 32.71 A
ATOM   1373  CA  LEU A 253      72.734  32.655  -5.073  1.00 33.94 A
ATOM   1374  CB  LEU A 253      73.612  31.901  -4.081  1.00 37.40 A
ATOM   1375  CG  LEU A 253      72.967  31.086  -2.950  1.00 41.64 A
ATOM   1376  CD1 LEU A 253      72.067  31.925  -2.048  1.00 43.86 A
ATOM   1377  CD2 LEU A 253      72.144  30.017  -3.597  1.00 45.52 A
ATOM   1378  C   LEU A 253      72.545  34.095  -4.603  1.00 35.67 A
ATOM   1379  O   LEU A 253      71.589  34.392  -3.897  1.00 37.48 A
ATOM   1380  N   LEU A 254      73.451  34.989  -4.995  1.00 36.38 A
ATOM   1381  CA  LEU A 254      73.372  36.397  -4.600  1.00 36.66 A
ATOM   1382  CB  LEU A 254      74.764  37.032  -4.572  1.00 33.81 A
ATOM   1383  CG  LEU A 254      75.824  36.402  -3.674  1.00 33.40 A
ATOM   1384  CD1 LEU A 254      77.183  37.022  -3.982  1.00 30.48 A
ATOM   1385  CD2 LEU A 254      75.440  36.574  -2.208  1.00 31.43 A
ATOM   1386  C   LEU A 254      72.485  37.240  -5.511  1.00 38.89 A
ATOM   1387  O   LEU A 254      72.079  38.328  -5.133  1.00 38.85 A
ATOM   1388  N   THR A 255      72.187  36.754  -6.709  1.00 42.60 A
ATOM   1389  CA  THR A 255      71.358  37.528  -7.624  1.00 47.21 A
ATOM   1390  CB  THR A 255      72.102  37.847  -8.941  1.00 47.08 A
ATOM   1391  OG1 THR A 255      72.008  36.718  -9.814  1.00 48.56 A
ATOM   1392  CG2 THR A 255      73.581  38.157  -8.686  1.00 45.65 A
ATOM   1393  C   THR A 255      70.044  36.848  -8.009  1.00 51.00 A
ATOM   1394  O   THR A 255      69.348  37.323  -8.903  1.00 51.80 A
ATOM   1395  N   GLU A 256      69.696  35.745  -7.353  1.00 55.01 A
ATOM   1396  CA  GLU A 256      68.450  35.044  -7.683  1.00 58.97 A
ATOM   1397  CB  GLU A 256      68.679  34.057  -8.832  1.00 59.81 A
ATOM   1398  CG  GLU A 256      68.922  34.707 -10.181  1.00 63.59 A
ATOM   1399  CD  GLU A 256      69.343  33.707 -11.240  1.00 65.64 A
ATOM   1400  OE1 GLU A 256      68.727  32.617 -11.310  1.00 67.44 A
ATOM   1401  OE2 GLU A 256      70.285  34.015 -12.007  1.00 66.61 A
ATOM   1402  C   GLU A 256      67.859  34.279  -6.512  1.00 60.83 A
ATOM   1403  O   GLU A 256      66.701  33.861  -6.563  1.00 61.27 A
ATOM   1404  N   ALA A 257      68.657  34.100  -5.463  1.00 62.31 A
ATOM   1405  CA  ALA A 257      68.234  33.348  -4.285  1.00 63.29 A
ATOM   1406  CB  ALA A 257      66.867  33.847  -3.784  1.00 62.76 A
ATOM   1407  C   ALA A 257      68.157  31.860  -4.651  1.00 63.64 A
ATOM   1408  O   ALA A 257      67.790  31.028  -3.825  1.00 64.96 A
ATOM   1409  N   SER A 258      68.523  31.532  -5.888  1.00 62.79 A
ATOM   1410  CA  SER A 258      68.485  30.150  -6.378  1.00 62.30 A
ATOM   1411  CB  SER A 258      68.049  30.144  -7.847  1.00 63.00 A
ATOM   1412  OG  SER A 258      68.762  31.129  -8.582  1.00 63.40 A
ATOM   1413  C   SER A 258      69.816  29.402  -6.237  1.00 61.09 A
ATOM   1414  O   SER A 258      70.862  30.009  -6.009  1.00 62.12 A
ATOM   1415  N   ALA A 259      69.774  28.083  -6.389  1.00 58.47 A
ATOM   1416  CA  ALA A 259      70.979  27.270  -6.278  1.00 55.79 A
ATOM   1417  CB  ALA A 259      71.403  27.164  -4.837  1.00 56.24 A
ATOM   1418  C   ALA A 259      70.738  25.886  -6.842  1.00 53.38 A
ATOM   1419  O   ALA A 259      69.641  25.347  -6.736  1.00 54.10 A
ATOM   1420  N   CYS A 260      71.768  25.302  -7.433  1.00 49.75 A
ATOM   1421  CA  CYS A 260      71.623  23.988  -8.015  1.00 45.68 A
ATOM   1422  CB  CYS A 260      71.067  24.106  -9.438  1.00 48.50 A
ATOM   1423  SG  CYS A 260      69.936  22.732  -9.899  1.00 57.53 A
ATOM   1424  C   CYS A 260      72.980  23.318  -8.022  1.00 41.30 A
ATOM   1425  O   CYS A 260      73.892  23.762  -7.335  1.00 39.24 A
ATOM   1426  N   LYS A 261      73.118  22.258  -8.805  1.00 36.63 A
ATOM   1427  CA  LYS A 261      74.369  21.535  -8.866  1.00 33.81 A
ATOM   1428  CB  LYS A 261      74.261  20.416  -9.897  1.00 34.27 A
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	ATOM	1429	CG	LYS A 261	73.250	19.362	-9.488	1.00	34.04 A
	ATOM	1430	CD	LYS A 261	72.995	18.353	-10.577	1.00	33.10 A
	ATOM	1431	CE	LYS A 261	71.983	17.336	-10.105	1.00	32.48 A
	ATOM	1432	NZ	LYS A 261	71.660	16.357	-11.176	1.00	33.10 A
5	ATOM	1433	C	LYS A 261	75.565	22.419	-9.153	1.00	31.80 A
	ATOM	1434	O	LYS A 261	76.636	22.214	-8.589	1.00	31.89 A
	ATOM	1435	N	SER A 262	75.389	23.405	-10.025	1.00	29.92 A
	ATOM	1436	CA	SER A 262	76.477	24.314	-10.354	1.00	28.19 A
	ATOM	1437	CB	SER A 262	76.034	25.309	-11.417	1.00	29.90 A
10	ATOM	1438	OG	SER A 262	76.184	24.732	-12.695	1.00	34.45 A
	ATOM	1439	C	SER A 262	77.047	25.069	-9.155	1.00	25.77 A
	ATOM	1440	O	SER A 262	78.225	25.405	-9.146	1.00	26.59 A
	ATOM	1441	N	SER A 263	76.216	25.347	-8.159	1.00	23.42 A
	ATOM	1442	CA	SER A 263	76.663	26.040	-6.953	1.00	23.04 A
15	ATOM	1443	CB	SER A 263	75.502	26.209	-5.979	1.00	24.64 A
	ATOM	1444	OG	SER A 263	74.463	26.963	-6.572	1.00	31.12 A
	ATOM	1445	C	SER A 263	77.777	25.233	-6.283	1.00	21.37 A
	ATOM	1446	O	SER A 263	78.745	25.803	-5.788	1.00	20.74 A
	ATOM	1447	N	ASP A 264	77.640	23.909	-6.268	1.00	19.11 A
20	ATOM	1448	CA	ASP A 264	78.674	23.062	-5.682	1.00	19.35 A
	ATOM	1449	CB	ASP A 264	78.206	21.609	-5.579	1.00	18.45 A
	ATOM	1450	CG	ASP A 264	77.164	21.406	-4.500	1.00	19.39 A
	ATOM	1451	OD1	ASP A 264	76.998	22.304	-3.649	1.00	20.34 A
	ATOM	1452	OD2	ASP A 264	76.522	20.338	-4.488	1.00	19.48 A
25	ATOM	1453	C	ASP A 264	79.943	23.127	-6.542	1.00	19.34 A
	ATOM	1454	O	ASP A 264	81.052	23.147	-6.018	1.00	20.70 A
	ATOM	1455	N	LEU A 265	79.772	23.162	-7.864	1.00	17.68 A
	ATOM	1456	CA	LEU A 265	80.898	23.232	-8.774	1.00	17.42 A
	ATOM	1457	CB	LEU A 265	80.406	23.058	-10.208	1.00	19.36 A
30	ATOM	1458	CG	LEU A 265	79.683	21.717	-10.453	1.00	19.53 A
	ATOM	1459	CD1	LEU A 265	79.189	21.655	-11.879	1.00	17.18 A
	ATOM	1460	CD2	LEU A 265	80.625	20.550	-10.168	1.00	14.91 A
	ATOM	1461	C	LEU A 265	81.619	24.566	-8.600	1.00	19.06 A
	ATOM	1462	O	LEU A 265	82.850	24.649	-8.697	1.00	18.60 A
35	ATOM	1463	N	TRP A 266	80.853	25.621	-8.350	1.00	18.60 A
	ATOM	1464	CA	TRP A 266	81.468	26.902	-8.107	1.00	18.62 A
	ATOM	1465	CB	TRP A 266	80.405	27.976	-7.876	1.00	19.75 A
	ATOM	1466	CG	TRP A 266	80.997	29.277	-7.382	1.00	21.53 A
	ATOM	1467	CD2	TRP A 266	81.357	30.420	-8.174	1.00	22.40 A
40	ATOM	1468	CE2	TRP A 266	81.917	31.375	-7.296	1.00	22.70 A
	ATOM	1469	CE3	TRP A 266	81.260	30.728	-9.541	1.00	21.62 A
	ATOM	1470	CD1	TRP A 266	81.344	29.582	-6.094	1.00	20.15 A
	ATOM	1471	NE1	TRP A 266	81.896	30.835	-6.037	1.00	20.80 A
	ATOM	1472	CZ2	TRP A 266	82.382	32.624	-7.739	1.00	22.47 A
45	ATOM	1473	CZ3	TRP A 266	81.721	31.961	-9.981	1.00	22.48 A
	ATOM	1474	CH2	TRP A 266	82.276	32.898	-9.080	1.00	23.40 A
	ATOM	1475	C	TRP A 266	82.338	26.734	-6.857	1.00	18.89 A
	ATOM	1476	O	TRP A 266	83.523	27.070	-6.875	1.00	20.01 A
	ATOM	1477	N	ALA A 267	81.755	26.204	-5.780	1.00	15.55 A
50	ATOM	1478	CA	ALA A 267	82.502	25.994	-4.540	1.00	15.55 A
	ATOM	1479	CB	ALA A 267	81.630	25.313	-3.499	1.00	13.20 A
	ATOM	1480	C	ALA A 267	83.738	25.145	-4.813	1.00	16.44 A
	ATOM	1481	O	ALA A 267	84.802	25.345	-4.218	1.00	17.65 A
	ATOM	1482	N	LEU A 268	83.597	24.181	-5.710	1.00	15.96 A
55	ATOM	1483	CA	LEU A 268	84.732	23.336	-6.055	1.00	17.56 A
	ATOM	1484	CB	LEU A 268	84.315	22.281	-7.098	1.00	16.91 A
	ATOM	1485	CG	LEU A 268	85.477	21.535	-7.775	1.00	16.43 A
	ATOM	1486	CD1	LEU A 268	86.214	20.697	-6.766	1.00	15.17 A
	ATOM	1487	CD2	LEU A 268	84.947	20.643	-8.871	1.00	17.18 A

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      ATOM   1488  C    LEU A 268      85.892  24.193  -6.599  1.00 15.96 A
      ATOM   1489  O    LEU A 268      87.032  24.040  -6.178  1.00 14.54 A
      ATOM   1490  N    GLY A 269      85.578  25.092  -7.530  1.00 17.15 A
      ATOM   1491  CA   GLY A 269      86.590  25.957  -8.116  1.00 18.32 A
    5 ATOM   1492  C    GLY A 269      87.339  26.722  -7.042  1.00 19.39 A
      ATOM   1493  O    GLY A 269      88.579  26.777  -7.042  1.00 19.66 A
      ATOM   1494  N    CYS A 270      86.579  27.297  -6.111  1.00 17.50 A
      ATOM   1495  CA   CYS A 270      87.154  28.043  -5.010  1.00 17.72 A
      ATOM   1496  CB   CYS A 270      86.047  28.551  -4.088  1.00 18.96 A
   10 ATOM   1497  SG   CYS A 270      84.981  29.801  -4.798  1.00 19.62 A
      ATOM   1498  C    CYS A 270      88.114  27.182  -4.201  1.00 18.63 A
      ATOM   1499  O    CYS A 270      89.213  27.612  -3.850  1.00 18.78 A
      ATOM   1500  N    ILE A 271      87.679  25.962  -3.900  1.00 20.05 A
      ATOM   1501  CA   ILE A 271      88.479  25.019  -3.130  1.00 20.08 A
   15 ATOM   1502  CB   ILE A 271      87.668  23.755  -2.812  1.00 20.09 A
      ATOM   1503  CG2  ILE A 271      88.592  22.654  -2.302  1.00 18.31 A
      ATOM   1504  CG1  ILE A 271      86.558  24.104  -1.810  1.00 18.38 A
      ATOM   1505  CD1  ILE A 271      85.396  23.125  -1.783  1.00 14.68 A
      ATOM   1506  C    ILE A 271      89.761  24.629  -3.858  1.00 20.41 A
   20 ATOM   1507  O    ILE A 271      90.826  24.548  -3.234  1.00 21.81 A
      ATOM   1508  N    ILE A 272      89.669  24.398  -5.166  1.00 18.41 A
      ATOM   1509  CA   ILE A 272      90.860  24.035  -5.934  1.00 19.20 A
      ATOM   1510  CB   ILE A 272      90.526  23.730  -7.412  1.00 20.04 A
      ATOM   1511  CG2  ILE A 272      91.808  23.488  -8.199  1.00 17.73 A
   25 ATOM   1512  CG1  ILE A 272      89.602  22.523  -7.513  1.00 19.47 A
      ATOM   1513  CD1  ILE A 272      89.001  22.386  -8.872  1.00 20.31 A
      ATOM   1514  C    ILE A 272      91.858  25.191  -5.932  1.00 19.57 A
      ATOM   1515  O    ILE A 272      93.061  24.978  -5.884  1.00 20.97 A
      ATOM   1516  N    TYR A 273      91.338  26.413  -6.028  1.00 19.42 A
   30 ATOM   1517  CA   TYR A 273      92.157  27.606  -6.041  1.00 18.41 A
      ATOM   1518  CB   TYR A 273      91.272  28.826  -6.294  1.00 18.70 A
      ATOM   1519  CG   TYR A 273      91.998  30.147  -6.252  1.00 19.81 A
      ATOM   1520  CD1  TYR A 273      92.357  30.729  -5.035  1.00 21.25 A
      ATOM   1521  CE1  TYR A 273      93.072  31.936  -4.990  1.00 22.12 A
   35 ATOM   1522  CD2  TYR A 273      92.366  30.804  -7.433  1.00 20.45 A
      ATOM   1523  CE2  TYR A 273      93.081  32.005  -7.403  1.00 20.42 A
      ATOM   1524  CZ   TYR A 273      93.432  32.563  -6.178  1.00 23.33 A
      ATOM   1525  OH   TYR A 273      94.159  33.731  -6.138  1.00 23.26 A
      ATOM   1526  C    TYR A 273      92.848  27.699  -4.687  1.00 19.40 A
   40 ATOM   1527  O    TYR A 273      94.051  27.945  -4.598  1.00 19.44 A
      ATOM   1528  N    GLN A 274      92.079  27.471  -3.632  1.00 19.53 A
      ATOM   1529  CA   GLN A 274      92.602  27.517  -2.278  1.00 21.26 A
      ATOM   1530  CB   GLN A 274      91.450  27.399  -1.290  1.00 22.36 A
      ATOM   1531  CG   GLN A 274      91.838  27.629   0.142  1.00 21.87 A
   45 ATOM   1532  CD   GLN A 274      90.643  27.531   1.054  1.00 23.64 A
      ATOM   1533  OE1  GLN A 274      89.499  27.479   0.585  1.00 22.12 A
      ATOM   1534  NE2  GLN A 274      90.890  27.517   2.369  1.00 24.45 A
      ATOM   1535  C    GLN A 274      93.656  26.435  -1.980  1.00 22.20 A
      ATOM   1536  O    GLN A 274      94.549  26.652  -1.160  1.00 22.03 A
   50 ATOM   1537  N    LEU A 275      93.558  25.275  -2.625  1.00 21.82 A
      ATOM   1538  CA   LEU A 275      94.550  24.223  -2.385  1.00 21.95 A
      ATOM   1539  CB   LEU A 275      94.104  22.886  -3.015  1.00 19.19 A
      ATOM   1540  CG   LEU A 275      92.934  22.153  -2.341  1.00 19.86 A
      ATOM   1541  CD1  LEU A 275      92.528  20.915  -3.134  1.00 19.79 A
   55 ATOM   1542  CD2  LEU A 275      93.333  21.757  -0.938  1.00 16.56 A
      ATOM   1543  C    LEU A 275      95.910  24.630  -2.962  1.00 21.62 A
      ATOM   1544  O    LEU A 275      96.950  24.414  -2.353  1.00 21.98 A
      ATOM   1545  N    VAL A 276      95.884  25.239  -4.137  1.00 20.54 A
      ATOM   1546  CA   VAL A 276      97.095  25.639  -4.828  1.00 21.48 A
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      ATOM   1547  CB  VAL A 276      96.810  25.795  -6.338  1.00 21.76 A
      ATOM   1548  CG1 VAL A 276      98.035  26.269  -7.061  1.00 20.72 A
      ATOM   1549  CG2 VAL A 276      96.332  24.479  -6.908  1.00 21.98 A
      ATOM   1550  C   VAL A 276      97.696  26.946  -4.315  1.00 23.17 A
   5  ATOM   1551  O   VAL A 276      98.913  27.055  -4.141  1.00 24.82 A
      ATOM   1552  N   ALA A 277      96.837  27.934  -4.085  1.00 22.20 A
      ATOM   1553  CA  ALA A 277      97.271  29.230  -3.628  1.00 19.31 A
      ATOM   1554  CB  ALA A 277      96.339  30.293  -4.174  1.00 19.24 A
      ATOM   1555  C   ALA A 277      97.380  29.350  -2.113  1.00 20.10 A
  10  ATOM   1556  O   ALA A 277      98.096  30.222  -1.622  1.00 20.73 A
      ATOM   1557  N   GLY A 278      96.686  28.493  -1.368  1.00 19.16 A
      ATOM   1558  CA  GLY A 278      96.748  28.579   0.084  1.00 18.62 A
      ATOM   1559  C   GLY A 278      95.634  29.425   0.677  1.00 21.09 A
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  15  ATOM   1561  N   LEU A 279      94.865  30.084  -0.190  1.00 22.58 A
      ATOM   1562  CA  LEU A 279      93.742  30.917   0.254  1.00 24.03 A
      ATOM   1563  CB  LEU A 279      94.190  32.365   0.448  1.00 23.98 A
      ATOM   1564  CG  LEU A 279      95.322  32.744   1.396  1.00 25.93 A
      ATOM   1565  CD1 LEU A 279      95.622  34.215   1.140  1.00 25.95 A
  20  ATOM   1566  CD2 LEU A 279      94.950  32.511   2.873  1.00 24.23 A
      ATOM   1567  C   LEU A 279      92.575  30.940  -0.735  1.00 23.96 A
      ATOM   1568  O   LEU A 279      92.759  30.776  -1.939  1.00 23.93 A
      ATOM   1569  N   PRO A 280      91.353  31.151  -0.231  1.00 24.60 A
      ATOM   1570  CD  PRO A 280      90.987  31.360   1.185  1.00 23.93 A
  25  ATOM   1571  CA  PRO A 280      90.177  31.208  -1.109  1.00 24.56 A
      ATOM   1572  CB  PRO A 280      89.024  31.319  -0.116  1.00 24.33 A
      ATOM   1573  CG  PRO A 280      89.656  32.027   1.076  1.00 24.23 A
      ATOM   1574  C   PRO A 280      90.324  32.453  -2.033  1.00 25.82 A
      ATOM   1575  O   PRO A 280      90.892  33.458  -1.632  1.00 27.28 A
  30  ATOM   1576  N   PRO A 281      89.798  32.396  -3.268  1.00 25.40 A
      ATOM   1577  CD  PRO A 281      88.807  31.385  -3.660  1.00 26.04 A
      ATOM   1578  CA  PRO A 281      89.862  33.470  -4.272  1.00 24.99 A
      ATOM   1579  CB  PRO A 281      89.150  32.871  -5.489  1.00 24.76 A
      ATOM   1580  CG  PRO A 281      88.882  31.442  -5.137  1.00 26.48 A
  35  ATOM   1581  C   PRO A 281      89.254  34.836  -3.921  1.00 25.24 A
      ATOM   1582  O   PRO A 281      89.803  35.886  -4.272  1.00 25.07 A
      ATOM   1583  N   PHE A 282      88.103  34.821  -3.264  1.00 24.47 A
      ATOM   1584  CA  PHE A 282      87.435  36.059  -2.918  1.00 24.29 A
      ATOM   1585  CB  PHE A 282      85.964  35.961  -3.320  1.00 23.11 A
  40  ATOM   1586  CG  PHE A 282      85.759  35.596  -4.774  1.00 21.99 A
      ATOM   1587  CD1 PHE A 282      85.936  36.543  -5.775  1.00 20.97 A
      ATOM   1588  CD2 PHE A 282      85.448  34.285  -5.139  1.00 21.76 A
      ATOM   1589  CE1 PHE A 282      85.812  36.194  -7.124  1.00 20.98 A
      ATOM   1590  CE2 PHE A 282      85.325  33.923  -6.469  1.00 20.98 A
  45  ATOM   1591  CZ  PHE A 282      85.509  34.885  -7.471  1.00 23.01 A
      ATOM   1592  C   PHE A 282      87.579  36.366  -1.435  1.00 25.85 A
      ATOM   1593  O   PHE A 282      86.963  35.707  -0.596  1.00 27.04 A
      ATOM   1594  N   ARG A 283      88.414  37.358  -1.124  1.00 27.56 A
      ATOM   1595  CA  ARG A 283      88.676  37.784   0.260  1.00 27.41 A
  50  ATOM   1596  CB  ARG A 283      90.116  37.451   0.648  1.00 28.05 A
      ATOM   1597  CG  ARG A 283      90.523  36.020   0.327  1.00 32.73 A
      ATOM   1598  CD  ARG A 283      91.944  35.722   0.788  1.00 36.54 A
      ATOM   1599  NE  ARG A 283      92.942  36.490   0.043  1.00 39.92 A
      ATOM   1600  CZ  ARG A 283      93.202  36.329  -1.253  1.00 42.59 A
  55  ATOM   1601  NH1 ARG A 283      92.544  35.421  -1.961  1.00 44.54 A
      ATOM   1602  NH2 ARG A 283      94.112  37.090  -1.853  1.00 43.94 A
      ATOM   1603  C   ARG A 283      88.445  39.291   0.394  1.00 27.01 A
      ATOM   1604  O   ARG A 283      88.682  40.047  -0.557  1.00 26.54 A
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      ATOM   1609   O    ALA A 284      87.193  40.440    4.048   1.00 24.83 A
   5  ATOM   1610   N    GLY A 285      87.330  42.663    3.659   1.00 25.04 A
      ATOM   1611   CA   GLY A 285      87.055  43.039    5.035   1.00 23.67 A
      ATOM   1612   C    GLY A 285      85.761  42.542    5.652   1.00 25.13 A
      ATOM   1613   O    GLY A 285      85.718  42.302    6.855   1.00 26.60 A
      ATOM   1614   N    ASN A 286      84.700  42.399    4.862   1.00 24.84 A
  10  ATOM   1615   CA   ASN A 286      83.418  41.923    5.391   1.00 23.82 A
      ATOM   1616   CB   ASN A 286      82.567  43.098    5.899   1.00 23.66 A
      ATOM   1617   CG   ASN A 286      82.362  44.190    4.843   1.00 24.14 A
      ATOM   1618   OD1  ASN A 286      81.835  43.947    3.747   1.00 22.27 A
      ATOM   1619   ND2  ASN A 286      82.776  45.402    5.178   1.00 24.49 A
  15  ATOM   1620   C    ASN A 286      82.672  41.185    4.296   1.00 24.75 A
      ATOM   1621   O    ASN A 286      83.124  41.160    3.153   1.00 25.32 A
      ATOM   1622   N    GLU A 287      81.522  40.610    4.630   1.00 26.04 A
      ATOM   1623   CA   GLU A 287      80.746  39.865    3.641   1.00 27.47 A
      ATOM   1624   CB   GLU A 287      79.549  39.175    4.287   1.00 30.33 A
  20  ATOM   1625   CG   GLU A 287      79.935  38.202    5.364   1.00 36.51 A
      ATOM   1626   CD   GLU A 287      78.792  37.288    5.766   1.00 41.45 A
      ATOM   1627   OE1  GLU A 287      77.608  37.712    5.641   1.00 43.02 A
      ATOM   1628   OE2  GLU A 287      79.092  36.155    6.222   1.00 41.33 A
      ATOM   1629   C    GLU A 287      80.250  40.679    2.467   1.00 25.95 A
  25  ATOM   1630   O    GLU A 287      80.279  40.203    1.330   1.00 25.67 A
      ATOM   1631   N    TYR A 288      79.772  41.893    2.730   1.00 25.20 A
      ATOM   1632   CA   TYR A 288      79.276  42.731    1.644   1.00 22.91 A
      ATOM   1633   CB   TYR A 288      78.870  44.113    2.152   1.00 22.98 A
      ATOM   1634   CG   TYR A 288      78.459  45.068    1.038   1.00 23.01 A
  30  ATOM   1635   CD1  TYR A 288      77.166  45.031    0.478   1.00 24.16 A
      ATOM   1636   CE1  TYR A 288      76.814  45.869   -0.589   1.00 22.73 A
      ATOM   1637   CD2  TYR A 288      79.376  45.965    0.508   1.00 21.34 A
      ATOM   1638   CE2  TYR A 288      79.043  46.796   -0.551   1.00 23.71 A
      ATOM   1639   CZ   TYR A 288      77.771  46.748   -1.099   1.00 25.48 A
  35  ATOM   1640   OH   TYR A 288      77.490  47.571   -2.172   1.00 26.98 A
      ATOM   1641   C    TYR A 288      80.352  42.882    0.578   1.00 22.37 A
      ATOM   1642   O    TYR A 288      80.068  42.735   -0.603   1.00 22.65 A
      ATOM   1643   N    LEU A 289      81.590  43.155    0.993   1.00 22.04 A
      ATOM   1644   CA   LEU A 289      82.691  43.326    0.037   1.00 23.92 A
  40  ATOM   1645   CB   LEU A 289      83.927  43.907    0.748   1.00 21.71 A
      ATOM   1646   CG   LEU A 289      83.661  45.326    1.298   1.00 23.89 A
      ATOM   1647   CD1  LEU A 289      84.716  45.787    2.326   1.00 17.24 A
      ATOM   1648   CD2  LEU A 289      83.570  46.273    0.118   1.00 19.08 A
      ATOM   1649   C    LEU A 289      83.050  42.025   -0.693   1.00 24.50 A
  45  ATOM   1650   O    LEU A 289      83.446  42.042   -1.852   1.00 24.85 A
      ATOM   1651   N    ILE A 290      82.906  40.904   -0.002   1.00 24.71 A
      ATOM   1652   CA   ILE A 290      83.182  39.601   -0.570   1.00 25.86 A
      ATOM   1653   CB   ILE A 290      83.131  38.521    0.528   1.00 26.67 A
      ATOM   1654   CG2  ILE A 290      83.229  37.154   -0.087   1.00 27.57 A
  50  ATOM   1655   CG1  ILE A 290      84.282  38.736    1.511   1.00 28.90 A
      ATOM   1656   CD1  ILE A 290      84.173  37.928    2.798   1.00 28.83 A
      ATOM   1657   C    ILE A 290      82.127  39.303   -1.637   1.00 26.89 A
      ATOM   1658   O    ILE A 290      82.446  38.879   -2.757   1.00 26.89 A
      ATOM   1659   N    PHE A 291      80.864  39.531   -1.294   1.00 27.48 A
  55  ATOM   1660   CA   PHE A 291      79.789  39.287   -2.249   1.00 28.46 A
      ATOM   1661   CB   PHE A 291      78.434  39.587   -1.620   1.00 27.24 A
      ATOM   1662   CG   PHE A 291      78.079  38.664   -0.496   1.00 27.02 A
      ATOM   1663   CD1  PHE A 291      78.716  37.431   -0.365   1.00 26.90 A
      ATOM   1664   CD2  PHE A 291      77.074  38.996    0.399   1.00 25.83 A
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      ATOM   1665  CE1 PHE A 291      78.353  36.545   0.637  1.00 27.02 A
      ATOM   1666  CE2 PHE A 291      76.700  38.109   1.412  1.00 28.02 A
      ATOM   1667  CZ  PHE A 291      77.338  36.882   1.532  1.00 26.74 A
      ATOM   1668  C   PHE A 291      79.971  40.159  -3.467  1.00 29.11 A
   5  ATOM   1669  O   PHE A 291      79.595  39.787  -4.584  1.00 30.18 A
      ATOM   1670  N   GLN A 292      80.559  41.324  -3.240  1.00 28.88 A
      ATOM   1671  CA  GLN A 292      80.783  42.280  -4.304  1.00 30.00 A
      ATOM   1672  CB  GLN A 292      81.215  43.604  -3.679  1.00 32.57 A
      ATOM   1673  CG  GLN A 292      81.191  44.799  -4.599  1.00 35.12 A
  10  ATOM   1674  CD  GLN A 292      81.208  46.113  -3.817  1.00 38.65 A
      ATOM   1675  OE1 GLN A 292      82.159  46.409  -3.078  1.00 39.67 A
      ATOM   1676  NE2 GLN A 292      80.150  46.903  -3.972  1.00 38.94 A
      ATOM   1677  C   GLN A 292      81.822  41.755  -5.296  1.00 28.96 A
      ATOM   1678  O   GLN A 292      81.633  41.844  -6.510  1.00 28.45 A
  15  ATOM   1679  N   LYS A 293      82.910  41.193  -4.787  1.00 26.32 A
      ATOM   1680  CA  LYS A 293      83.930  40.661  -5.669  1.00 26.90 A
      ATOM   1681  CB  LYS A 293      85.174  40.319  -4.858  1.00 28.03 A
      ATOM   1682  CG  LYS A 293      85.777  41.539  -4.177  1.00 28.52 A
      ATOM   1683  CD  LYS A 293      87.065  41.208  -3.482  1.00 29.14 A
  20  ATOM   1684  CE  LYS A 293      87.912  42.449  -3.269  1.00 30.09 A
      ATOM   1685  NZ  LYS A 293      89.165  42.157  -2.490  1.00 30.06 A
      ATOM   1686  C   LYS A 293      83.414  39.432  -6.434  1.00 26.13 A
      ATOM   1687  O   LYS A 293      83.721  39.231  -7.617  1.00 26.02 A
      ATOM   1688  N   ILE A 294      82.617  38.621  -5.755  1.00 24.49 A
  25  ATOM   1689  CA  ILE A 294      82.047  37.429  -6.362  1.00 24.40 A
      ATOM   1690  CB  ILE A 294      81.168  36.680  -5.340  1.00 23.24 A
      ATOM   1691  CG2 ILE A 294      80.154  35.763  -6.046  1.00 21.00 A
      ATOM   1692  CG1 ILE A 294      82.072  35.929  -4.365  1.00 19.23 A
      ATOM   1693  CD1 ILE A 294      81.388  35.559  -3.067  1.00 17.91 A
  30  ATOM   1694  C   ILE A 294      81.224  37.744  -7.608  1.00 26.38 A
      ATOM   1695  O   ILE A 294      81.428  37.139  -8.661  1.00 25.96 A
      ATOM   1696  N   ILE A 295      80.303  38.694  -7.505  1.00 28.38 A
      ATOM   1697  CA  ILE A 295      79.467  39.018  -8.659  1.00 31.11 A
      ATOM   1698  CB  ILE A 295      78.243  39.852  -8.248  1.00 31.46 A
  35  ATOM   1699  CG2 ILE A 295      77.548  39.181  -7.068  1.00 32.78 A
      ATOM   1700  CG1 ILE A 295      78.669  41.268  -7.871  1.00 31.79 A
      ATOM   1701  CD1 ILE A 295      77.518  42.132  -7.438  1.00 33.46 A
      ATOM   1702  C   ILE A 295      80.201  39.731  -9.798  1.00 31.35 A
      ATOM   1703  O   ILE A 295      79.709  39.784 -10.930  1.00 32.03 A
  40  ATOM   1704  N   LYS A 296      81.374  40.269  -9.511  1.00 30.68 A
      ATOM   1705  CA  LYS A 296      82.129  40.937 -10.552  1.00 31.64 A
      ATOM   1706  CB  LYS A 296      82.683  42.275 -10.041  1.00 32.01 A
      ATOM   1707  CG  LYS A 296      81.605  43.213  -9.520  1.00 34.12 A
      ATOM   1708  CD  LYS A 296      82.184  44.441  -8.841  1.00 37.38 A
  45  ATOM   1709  CE  LYS A 296      82.299  45.609  -9.803  1.00 40.30 A
      ATOM   1710  NZ  LYS A 296      82.864  46.819  -9.119  1.00 42.94 A
      ATOM   1711  C   LYS A 296      83.258  40.010 -10.966  1.00 31.87 A
      ATOM   1712  O   LYS A 296      84.135  40.398 -11.745  1.00 32.98 A
      ATOM   1713  N   LEU A 297      83.227  38.780 -10.443  1.00 30.62 A
  50  ATOM   1714  CA  LEU A 297      84.253  37.775 -10.735  1.00 29.78 A
      ATOM   1715  CB  LEU A 297      84.100  37.253 -12.169  1.00 29.42 A
      ATOM   1716  CG  LEU A 297      84.802  35.931 -12.527  1.00 29.13 A
      ATOM   1717  CD1 LEU A 297      84.142  34.776 -11.783  1.00 27.91 A
      ATOM   1718  CD2 LEU A 297      84.725  35.682 -14.024  1.00 26.86 A
  55  ATOM   1719  C   LEU A 297      85.622  38.436 -10.565  1.00 29.62 A
      ATOM   1720  O   LEU A 297      86.489  38.333 -11.419  1.00 28.99 A
      ATOM   1721  N   GLU A 298      85.807  39.091  -9.427  1.00 29.81 A
      ATOM   1722  CA  GLU A 298      87.027  39.826  -9.143  1.00 30.88 A
      ATOM   1723  CB  GLU A 298      86.622  41.166  -8.510  1.00 33.22 A
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      ATOM   1724  CG   GLU A 298       87.754  42.136   -8.228  1.00 38.19 A
      ATOM   1725  CD   GLU A 298       87.317  43.274   -7.303  1.00 41.34 A
      ATOM   1726  OE1  GLU A 298       86.416  44.054   -7.684  1.00 43.93 A
      ATOM   1727  OE2  GLU A 298       87.867  43.382   -6.187  1.00 43.19 A
 5    ATOM   1728  C    GLU A 298       88.071  39.110   -8.269  1.00 29.28 A
      ATOM   1729  O    GLU A 298       88.066  39.230   -7.045  1.00 30.04 A
      ATOM   1730  N    TYR A 299       88.972  38.375   -8.906  1.00 26.46 A
      ATOM   1731  CA   TYR A 299       90.034  37.669   -8.194  1.00 26.46 A
      ATOM   1732  CB   TYR A 299       89.548  36.315   -7.640  1.00 24.23 A
10    ATOM   1733  CG   TYR A 299       89.403  35.252   -8.709  1.00 23.32 A
      ATOM   1734  CD1  TYR A 299       88.369  35.318   -9.653  1.00 23.42 A
      ATOM   1735  CE1  TYR A 299       88.274  34.392  -10.686  1.00 23.13 A
      ATOM   1736  CD2  TYR A 299       90.337  34.227   -8.829  1.00 21.77 A
      ATOM   1737  CE2  TYR A 299       90.250  33.292   -9.864  1.00 21.81 A
15    ATOM   1738  CZ   TYR A 299       89.214  33.379  -10.784  1.00 22.35 A
      ATOM   1739  OH   TYR A 299       89.089  32.444  -11.780  1.00 21.61 A
      ATOM   1740  C    TYR A 299       91.102  37.416   -9.245  1.00 28.31 A
      ATOM   1741  O    TYR A 299       90.864  37.622  -10.426  1.00 27.25 A
      ATOM   1742  N    ASP A 300       92.277  36.959   -8.844  1.00 30.57 A
20    ATOM   1743  CA   ASP A 300       93.282  36.687   -9.851  1.00 33.57 A
      ATOM   1744  CB   ASP A 300       94.012  37.980  -10.193  1.00 38.77 A
      ATOM   1745  CG   ASP A 300       94.382  38.768   -8.968  1.00 43.17 A
      ATOM   1746  OD1  ASP A 300       95.245  38.283   -8.197  1.00 46.59 A
      ATOM   1747  OD2  ASP A 300       93.802  39.865   -8.773  1.00 45.78 A
25    ATOM   1748  C    ASP A 300       94.232  35.607   -9.364  1.00 33.20 A
      ATOM   1749  O    ASP A 300       94.311  35.354   -8.169  1.00 33.46 A
      ATOM   1750  N    PHE A 301       94.937  34.959  -10.287  1.00 32.16 A
      ATOM   1751  CA   PHE A 301       95.853  33.892   -9.916  1.00 33.41 A
      ATOM   1752  CB   PHE A 301       95.922  32.813  -11.001  1.00 32.89 A
30    ATOM   1753  CG   PHE A 301       94.590  32.240  -11.403  1.00 33.05 A
      ATOM   1754  CD1  PHE A 301       93.763  32.921  -12.297  1.00 31.61 A
      ATOM   1755  CD2  PHE A 301       94.171  31.006  -10.905  1.00 30.94 A
      ATOM   1756  CE1  PHE A 301       92.548  32.387  -12.687  1.00 31.29 A
      ATOM   1757  CE2  PHE A 301       92.961  30.466  -11.287  1.00 31.42 A
35    ATOM   1758  CZ   PHE A 301       92.142  31.157  -12.184  1.00 32.69 A
      ATOM   1759  C    PHE A 301       97.287  34.359   -9.649  1.00 34.23 A
      ATOM   1760  O    PHE A 301       97.784  35.274  -10.303  1.00 33.66 A
      ATOM   1761  N    PRO A 302       97.962  33.750   -8.665  1.00 35.45 A
      ATOM   1762  CD   PRO A 302       97.426  32.932   -7.564  1.00 35.55 A
40    ATOM   1763  CA   PRO A 302       99.347  34.145   -8.395  1.00 35.82 A
      ATOM   1764  CB   PRO A 302       99.612  33.571   -7.009  1.00 35.09 A
      ATOM   1765  CG   PRO A 302       98.682  32.401   -6.933  1.00 34.93 A
      ATOM   1766  C    PRO A 302      100.214  33.506  -10.083  1.00 37.30 A
      ATOM   1767  O    PRO A 302       99.830  32.504  -10.083  1.00 37.30 A
45    ATOM   1768  N    ALA A 303      101.370  34.100   -9.744  1.00 39.16 A
      ATOM   1769  CA   ALA A 303      102.293  33.641  -10.775  1.00 39.50 A
      ATOM   1770  CB   ALA A 303      103.612  34.393  -10.640  1.00 39.58 A
      ATOM   1771  C    ALA A 303      102.577  32.148  -10.832  1.00 41.05 A
      ATOM   1772  O    ALA A 303      102.642  31.569  -11.920  1.00 42.39 A
50    ATOM   1773  N    ALA A 304      102.758  31.526   -9.671  1.00 40.38 A
      ATOM   1774  CA   ALA A 304      103.099  30.105   -9.614  1.00 39.93 A
      ATOM   1775  CB   ALA A 304      103.627  29.772   -8.212  1.00 41.64 A
      ATOM   1776  C    ALA A 304      102.025  29.089  -10.002  1.00 39.29 A
      ATOM   1777  O    ALA A 304      102.343  27.993  -10.453  1.00 39.29 A
55    ATOM   1778  N    PHE A 305      100.764  29.453   -9.813  1.00 35.83 A
      ATOM   1779  CA   PHE A 305       99.614  28.587  -10.085  1.00 33.62 A
      ATOM   1780  CB   PHE A 305       98.376  29.475  -10.278  1.00 32.70 A
      ATOM   1781  CG   PHE A 305       97.096  28.857   -9.796  1.00 31.41 A
      ATOM   1782  CD1  PHE A 305       96.422  27.915  -10.574  1.00 30.30 A
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      ATOM   1783  CD2 PHE A 305      96.556  29.225  -8.562  1.00 30.99 A
      ATOM   1784  CE1 PHE A 305      95.230  27.350 -10.136  1.00 29.76 A
      ATOM   1785  CE2 PHE A 305      95.352  28.663  -8.105  1.00 30.08 A
      ATOM   1786  CZ  PHE A 305      94.689  27.725  -8.897  1.00 30.22 A
   5  ATOM   1787  C   PHE A 305      99.735  27.580 -11.241  1.00 32.03 A
      ATOM   1788  O   PHE A 305      99.767  27.962 -12.405  1.00 32.54 A
      ATOM   1789  N   PHE A 306      99.781  26.290 -10.914  1.00 31.58 A
      ATOM   1790  CA  PHE A 306      99.886  25.235 -11.932  1.00 30.32 A
      ATOM   1791  CB  PHE A 306      99.518  23.875 -11.338  1.00 29.86 A
  10  ATOM   1792  CG  PHE A 306     100.087  23.639  -9.971  1.00 30.29 A
      ATOM   1793  CD1 PHE A 306     101.447  23.783  -9.733  1.00 30.37 A
      ATOM   1794  CD2 PHE A 306      99.259  23.275  -8.919  1.00 30.23 A
      ATOM   1795  CE1 PHE A 306     101.975  23.570  -8.465  1.00 30.98 A
      ATOM   1796  CE2 PHE A 306      99.773  23.061  -7.648  1.00 30.91 A
  15  ATOM   1797  CZ  PHE A 306     101.136  23.210  -7.418  1.00 31.14 A
      ATOM   1798  C   PHE A 306      98.949  25.545 -13.096  1.00 29.48 A
      ATOM   1799  O   PHE A 306      97.738  25.631 -12.920  1.00 30.39 A
      ATOM   1800  N   PRO A 307      99.501  25.701 -14.309  1.00 28.76 A
      ATOM   1801  CD  PRO A 307     100.934  25.575 -14.635  1.00 27.67 A
  20  ATOM   1802  CA  PRO A 307      98.731  26.014 -15.520  1.00 27.24 A
      ATOM   1803  CB  PRO A 307      99.757  25.848 -16.635  1.00 25.23 A
      ATOM   1804  CG  PRO A 307     101.010  26.262 -15.978  1.00 25.61 A
      ATOM   1805  C   PRO A 307      97.457  25.221 -15.787  1.00 25.86 A
      ATOM   1806  O   PRO A 307      96.419  25.808 -16.098  1.00 24.65 A
  25  ATOM   1807  N   LYS A 308      97.521  23.901 -15.682  1.00 25.13 A
      ATOM   1808  CA  LYS A 308      96.330  23.109 -15.952  1.00 24.53 A
      ATOM   1809  CB  LYS A 308      96.689  21.640 -16.136  1.00 24.86 A
      ATOM   1810  CG  LYS A 308      97.361  21.413 -17.490  1.00 25.50 A
      ATOM   1811  CD  LYS A 308      97.987  20.047 -17.616  1.00 27.33 A
  30  ATOM   1812  CE  LYS A 308      98.678  19.886 -18.961  1.00 29.39 A
      ATOM   1813  NZ  LYS A 308      99.232  18.505 -19.146  1.00 32.38 A
      ATOM   1814  C   LYS A 308      95.282  23.293 -14.890  1.00 24.82 A
      ATOM   1815  O   LYS A 308      94.085  23.281 -15.193  1.00 24.89 A
      ATOM   1816  N   ALA A 309      95.716  23.489 -13.647  1.00 24.73 A
  35  ATOM   1817  CA  ALA A 309      94.758  23.716 -12.573  1.00 25.03 A
      ATOM   1818  CB  ALA A 309      95.445  23.662 -11.208  1.00 24.10 A
      ATOM   1819  C   ALA A 309      94.140  25.094 -12.816  1.00 25.34 A
      ATOM   1820  O   ALA A 309      92.934  25.273 -12.679  1.00 26.34 A
      ATOM   1821  N   ARG A 310      94.958  26.067 -13.198  1.00 26.07 A
  40  ATOM   1822  CA  ARG A 310      94.419  27.396 -13.453  1.00 28.32 A
      ATOM   1823  CB  ARG A 310      95.513  28.359 -13.908  1.00 29.31 A
      ATOM   1824  CG  ARG A 310      94.940  29.708 -14.288  1.00 31.58 A
      ATOM   1825  CD  ARG A 310      95.917  30.588 -15.030  1.00 31.47 A
      ATOM   1826  NE  ARG A 310      95.275  31.825 -15.473  1.00 34.52 A
  45  ATOM   1827  CZ  ARG A 310      95.771  33.050 -15.276  1.00 35.51 A
      ATOM   1828  NH1 ARG A 310      96.929  33.205 -14.633  1.00 33.99 A
      ATOM   1829  NH2 ARG A 310      95.106  34.124 -15.720  1.00 32.10 A
      ATOM   1830  C   ARG A 310      93.331  27.348 -14.521  1.00 29.03 A
      ATOM   1831  O   ARG A 310      92.308  28.034 -14.418  1.00 29.32 A
  50  ATOM   1832  N   ASP A 311      93.548  26.536 -15.551  1.00 29.06 A
      ATOM   1833  CA  ASP A 311      92.571  26.432 -16.620  1.00 29.87 A
      ATOM   1834  CB  ASP A 311      93.156  25.636 -17.776  1.00 31.71 A
      ATOM   1835  CG  ASP A 311      92.207  25.537 -18.953  1.00 34.71 A
      ATOM   1836  OD1 ASP A 311      91.288  24.690 -18.912  1.00 36.90 A
  55  ATOM   1837  OD2 ASP A 311      92.378  26.312 -19.918  1.00 36.33 A
      ATOM   1838  C   ASP A 311      91.264  25.800 -16.128  1.00 29.70 A
      ATOM   1839  O   ASP A 311      90.169  26.238 -16.513  1.00 29.95 A
      ATOM   1840  N   LEU A 312      91.383  24.778 -15.282  1.00 26.64 A
      ATOM   1841  CA  LEU A 312      90.215  24.112 -14.715  1.00 24.92 A
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      ATOM   1842   CB   LEU A 312      90.645   22.911 -13.869   1.00 23.93 A
      ATOM   1843   CG   LEU A 312      89.504   22.112 -13.227   1.00 24.48 A
      ATOM   1844   CD1  LEU A 312      88.569   21.610 -14.296   1.00 25.07 A
      ATOM   1845   CD2  LEU A 312      90.061   20.945 -12.460   1.00 25.13 A
   5  ATOM   1846   C    LEU A 312      89.412   25.095 -13.841   1.00 23.85 A
      ATOM   1847   O    LEU A 312      88.182   25.136 -13.896   1.00 21.21 A
      ATOM   1848   N    VAL A 313      90.121   25.886 -13.042   1.00 23.12 A
      ATOM   1849   CA   VAL A 313      89.484   26.865 -12.171   1.00 23.55 A
      ATOM   1850   CB   VAL A 313      90.536   27.583 -11.297   1.00 22.33 A
  10  ATOM   1851   CG1  VAL A 313      89.898   28.752 -10.559   1.00 19.05 A
      ATOM   1852   CG2  VAL A 313      91.144   26.607 -10.305   1.00 19.89 A
      ATOM   1853   C    VAL A 313      88.701   27.915 -12.975   1.00 25.59 A
      ATOM   1854   O    VAL A 313      87.590   28.305 -12.605   1.00 26.57 A
      ATOM   1855   N    GLU A 314      89.278   28.378 -14.076   1.00 26.08 A
  15  ATOM   1856   CA   GLU A 314      88.598   29.370 -14.895   1.00 26.79 A
      ATOM   1857   CB   GLU A 314      89.543   29.928 -15.948   1.00 27.50 A
      ATOM   1858   CG   GLU A 314      90.739   30.639 -15.381   1.00 32.29 A
      ATOM   1859   CD   GLU A 314      91.687   31.094 -16.463   1.00 35.85 A
      ATOM   1860   OE1  GLU A 314      91.967   30.280 -17.375   1.00 38.06 A
  20  ATOM   1861   OE2  GLU A 314      92.157   32.257 -16.399   1.00 38.48 A
      ATOM   1862   C    GLU A 314      87.370   28.787 -15.577   1.00 26.22 A
      ATOM   1863   O    GLU A 314      86.499   29.527 -16.038   1.00 27.23 A
      ATOM   1864   N    LYS A 315      87.300   27.464 -15.662   1.00 24.74 A
      ATOM   1865   CA   LYS A 315      86.151   26.832 -16.294   1.00 23.60 A
  25  ATOM   1866   CB   LYS A 315      86.578   25.584 -17.073   1.00 23.69 A
      ATOM   1867   CG   LYS A 315      85.865   25.865 -18.344   1.00 22.41 A
      ATOM   1868   CD   LYS A 315      87.825   24.545 -18.968   1.00 25.68 A
      ATOM   1869   CE   LYS A 315      88.768   24.695 -20.155   1.00 24.86 A
      ATOM   1870   NZ   LYS A 315      88.082   25.219 -21.346   1.00 28.62 A
  30  ATOM   1871   C    LYS A 315      85.119   26.471 -15.230   1.00 23.42 A
      ATOM   1872   O    LYS A 315      84.043   25.970 -15.541   1.00 25.37 A
      ATOM   1873   N    LEU A 316      85.454   26.730 -13.970   1.00 21.88 A
      ATOM   1874   CA   LEU A 316      84.549   26.461 -12.862   1.00 20.21 A
      ATOM   1875   CB   LEU A 316      85.272   25.705 -11.767   1.00 19.57 A
  35  ATOM   1876   CG   LEU A 316      85.409   24.221 -12.078   1.00 21.14 A
      ATOM   1877   CD1  LEU A 316      86.272   23.552 -11.009   1.00 19.21 A
      ATOM   1878   CD2  LEU A 316      84.000   23.600 -12.166   1.00 18.59 A
      ATOM   1879   C    LEU A 316      83.996   27.758 -12.290   1.00 21.31 A
      ATOM   1880   O    LEU A 316      82.811   27.848 -11.955   1.00 18.79 A
  40  ATOM   1881   N    LEU A 317      84.865   28.762 -12.175   1.00 20.59 A
      ATOM   1882   CA   LEU A 317      84.446   30.038 -11.646   1.00 21.64 A
      ATOM   1883   CB   LEU A 317      85.606   30.707 -10.900   1.00 21.42 A
      ATOM   1884   CG   LEU A 317      86.130   29.892  -9.711   1.00 21.80 A
      ATOM   1885   CD1  LEU A 317      87.299   30.599  -9.047   1.00 23.09 A
  45  ATOM   1886   CD2  LEU A 317      85.031   29.688  -8.724   1.00 20.34 A
      ATOM   1887   C    LEU A 317      83.940   30.890 -12.810   1.00 23.34 A
      ATOM   1888   O    LEU A 317      84.568   31.859 -13.242   1.00 23.29 A
      ATOM   1889   N    VAL A 318      82.786   30.485 -13.324   1.00 24.06 A
      ATOM   1890   CA   VAL A 318      82.135   31.161 -14.436   1.00 23.46 A
  50  ATOM   1891   CB   VAL A 318      81.829   30.150 -15.547   1.00 24.32 A
      ATOM   1892   CG1  VAL A 318      81.061   30.828 -16.670   1.00 22.57 A
      ATOM   1893   CG2  VAL A 318      83.136   29.524 -16.049   1.00 20.68 A
      ATOM   1894   C    VAL A 318      80.838   31.765 -13.918   1.00 24.86 A
      ATOM   1895   O    VAL A 318      80.050   31.086 -13.250   1.00 24.86 A
  55  ATOM   1896   N    LEU A 319      80.603   33.036 -14.215   1.00 24.95 A
      ATOM   1897   CA   LEU A 319      79.383   33.688 -13.731   1.00 25.79 A
      ATOM   1898   CB   LEU A 319      79.379   35.157 -14.154   1.00 25.38 A
      ATOM   1899   CG   LEU A 319      80.466   35.963 -13.417   1.00 27.04 A
      ATOM   1900   CD1  LEU A 319      80.452   37.421 -13.869   1.00 25.54 A
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      ATOM   1901   CD2  LEU A 319      80.241  35.872 -11.907  1.00 23.27 A
      ATOM   1902   C    LEU A 319      78.077  32.989 -14.141  1.00 26.05 A
      ATOM   1903   O    LEU A 319      77.171  32.819 -13.319  1.00 27.69 A
      ATOM   1904   N    ASP A 320      77.982  32.580 -15.400  1.00 25.08 A
  5   ATOM   1905   CA   ASP A 320      76.804  31.881 -15.892  1.00 24.00 A
      ATOM   1906   CB   ASP A 320      76.788  31.907 -17.420  1.00 24.02 A
      ATOM   1907   CG   ASP A 320      75.597  31.175 -17.996  1.00 27.27 A
      ATOM   1908   OD1  ASP A 320      75.009  30.337 -17.271  1.00 29.66 A
      ATOM   1909   OD2  ASP A 320      75.253  31.417 -19.175  1.00 30.03 A
 10   ATOM   1910   C    ASP A 320      76.846  30.427 -15.396  1.00 24.04 A
      ATOM   1911   O    ASP A 320      77.661  29.623 -15.846  1.00 25.11 A
      ATOM   1912   N    ALA A 321      75.940  30.094 -14.489  1.00 23.73 A
      ATOM   1913   CA   ALA A 321      75.867  28.770 -13.887  1.00 23.58 A
      ATOM   1914   CB   ALA A 321      74.710  28.720 -12.916  1.00 23.62 A
 15   ATOM   1915   C    ALA A 321      75.765  27.599 -14.853  1.00 24.90 A
      ATOM   1916   O    ALA A 321      76.221  26.497 -14.549  1.00 24.36 A
      ATOM   1917   N    THR A 322      75.176  27.834 -16.019  1.00 25.50 A
      ATOM   1918   CA   THR A 322      75.008  26.772 -17.011  1.00 24.60 A
      ATOM   1919   CB   THR A 322      73.816  27.064 -17.909  1.00 23.09 A
 20   ATOM   1920   OG1  THR A 322      74.079  28.263 -18.646  1.00 23.74 A
      ATOM   1921   CG2  THR A 322      72.568  27.260 -17.080  1.00 20.71 A
      ATOM   1922   C    THR A 322      76.238  26.596 -17.893  1.00 25.24 A
      ATOM   1923   O    THR A 322      76.221  25.807 -18.832  1.00 26.45 A
      ATOM   1924   N    LYS A 323      77.300  27.331 -17.592  1.00 25.05 A
 25   ATOM   1925   CA   LYS A 323      78.526  27.239 -18.366  1.00 26.46 A
      ATOM   1926   CB   LYS A 323      78.972  28.627 -18.823  1.00 28.68 A
      ATOM   1927   CG   LYS A 323      78.050  29.304 -19.814  1.00 31.27 A
      ATOM   1928   CD   LYS A 323      78.470  29.004 -21.240  1.00 34.38 A
      ATOM   1929   CE   LYS A 323      77.850  29.986 -22.243  1.00 35.12 A
 30   ATOM   1930   NZ   LYS A 323      76.363  29.936 -22.251  1.00 36.71 A
      ATOM   1931   C    LYS A 323      79.660  26.621 -17.556  1.00 26.39 A
      ATOM   1932   O    LYS A 323      80.795  26.615 -18.010  1.00 28.51 A
      ATOM   1933   N    ARG A 324      79.372  26.114 -16.360  1.00 24.50 A
      ATOM   1934   CA   ARG A 324      80.429  25.524 -15.543  1.00 23.37 A
 35   ATOM   1935   CB   ARG A 324      80.087  25.633 -14.049  1.00 23.41 A
      ATOM   1936   CG   ARG A 324      80.233  27.034 -13.520  1.00 21.60 A
      ATOM   1937   CD   ARG A 324      79.594  27.220 -12.173  1.00 21.55 A
      ATOM   1938   NE   ARG A 324      79.245  28.624 -11.986  1.00 19.69 A
      ATOM   1939   CZ   ARG A 324      78.273  29.054 -11.191  1.00 19.84 A
 40   ATOM   1940   NH1  ARG A 324      77.555  28.183 -10.496  1.00 16.83 A
      ATOM   1941   NH2  ARG A 324      77.990  30.358 -11.129  1.00 21.41 A
      ATOM   1942   C    ARG A 324      80.717  24.085 -15.897  1.00 22.63 A
      ATOM   1943   O    ARG A 324      79.798  23.280 -16.058  1.00 24.44 A
      ATOM   1944   N    LEU A 325      82.000  23.767 -16.023  1.00 20.68 A
 45   ATOM   1945   CA   LEU A 325      82.414  22.411 -16.352  1.00 20.98 A
      ATOM   1946   CB   LEU A 325      83.952  22.330 -16.386  1.00 20.82 A
      ATOM   1947   CG   LEU A 325      84.596  21.147 -17.131  1.00 23.08 A
      ATOM   1948   CD1  LEU A 325      84.149  21.194 -18.595  1.00 21.39 A
      ATOM   1949   CD2  LEU A 325      86.132  21.173 -17.038  1.00 20.00 A
 50   ATOM   1950   C    LEU A 325      81.840  21.454 -15.290  1.00 20.43 A
      ATOM   1951   O    LEU A 325      82.062  21.633 -14.097  1.00 18.45 A
      ATOM   1952   N    GLY A 326      81.076  20.456 -15.725  1.00 21.33 A
      ATOM   1953   CA   GLY A 326      80.501  19.513 -14.778  1.00 20.60 A
      ATOM   1954   C    GLY A 326      78.984  19.523 -14.701  1.00 22.39 A
 55   ATOM   1955   O    GLY A 326      78.383  18.493 -14.378  1.00 22.59 A
      ATOM   1956   N    CYS A 327      78.358  20.664 -15.009  1.00 23.36 A
      ATOM   1957   CA   CYS A 327      76.896  20.771 -14.963  1.00 25.18 A
      ATOM   1958   CB   CYS A 327      76.453  22.246 -14.889  1.00 25.79 A
      ATOM   1959   SG   CYS A 327      76.742  23.237 -16.364  1.00 31.42 A
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ATOM    1960  C    CYS A 327      76.229  20.074 -16.148  1.00 24.99 A
ATOM    1961  O    CYS A 327      76.887  19.743 -17.129  1.00 24.31 A
ATOM    1962  N    ALA A 328      74.923  19.847 -16.040  1.00 26.34 A
ATOM    1963  CA   ALA A 328      74.157  19.172 -17.094  1.00 27.51 A
ATOM    1964  CB   ALA A 328      72.703  18.949 -16.629  1.00 26.81 A
ATOM    1965  C    ALA A 328      74.179  19.905 -18.443  1.00 28.11 A
ATOM    1966  O    ALA A 328      74.243  19.274 -19.501  1.00 27.66 A
ATOM    1967  N    GLU A 329      74.144  21.231 -18.418  1.00 28.05 A
ATOM    1968  CA   GLU A 329      74.172  21.973 -19.668  1.00 29.54 A
ATOM    1969  CB   GLU A 329      73.915  23.458 -19.428  1.00 32.18 A
ATOM    1970  CG   GLU A 329      72.539  23.783 -18.863  1.00 37.89 A
ATOM    1971  CD   GLU A 329      72.418  23.503 -17.374  1.00 41.37 A
ATOM    1972  OE1  GLU A 329      73.464  23.308 -16.711  1.00 43.80 A
ATOM    1973  OE2  GLU A 329      71.273  23.495 -16.863  1.00 43.66 A
ATOM    1974  C    GLU A 329      75.514  21.807 -20.377  1.00 29.08 A
ATOM    1975  O    GLU A 329      75.602  21.927 -21.605  1.00 27.73 A
ATOM    1976  N    MET A 330      76.559  21.540 -19.598  1.00 27.54 A
ATOM    1977  CA   MET A 330      77.894  21.359 -20.148  1.00 25.71 A
ATOM    1978  CB   MET A 330      78.945  21.963 -19.219  1.00 27.88 A
ATOM    1979  CG   MET A 330      78.964  23.489 -19.209  1.00 30.29 A
ATOM    1980  SD   MET A 330      79.429  24.194 -20.819  1.00 34.04 A
ATOM    1981  CE   MET A 330      81.187  23.670 -20.936  1.00 29.55 A
ATOM    1982  C    MET A 330      78.156  19.884 -20.343  1.00 24.53 A
ATOM    1983  O    MET A 330      79.290  19.473 -20.575  1.00 22.65 A
ATOM    1984  N    GLU A 331      77.089  19.095 -20.221  1.00 22.87 A
ATOM    1985  CA   GLU A 331      77.139  17.654 -20.415  1.00 21.38 A
ATOM    1986  CB   GLU A 331      77.854  17.339 -21.735  1.00 22.71 A
ATOM    1987  CG   GLU A 331      76.903  16.916 -22.837  1.00 23.01 A
ATOM    1988  CD   GLU A 331      75.599  17.720 -22.875  1.00 24.76 A
ATOM    1989  OE1  GLU A 331      75.570  18.830 -23.441  1.00 26.12 A
ATOM    1990  OE2  GLU A 331      74.588  17.230 -22.337  1.00 24.22 A
ATOM    1991  C    GLU A 331      77.671  16.765 -19.290  1.00 21.01 A
ATOM    1992  O    GLU A 331      78.075  15.619 -19.517  1.00 19.50 A
ATOM    1993  N    GLY A 332      77.675  17.284 -18.071  1.00 19.73 A
ATOM    1994  CA   GLY A 332      78.056  16.445 -16.954  1.00 17.80 A
ATOM    1995  C    GLY A 332      79.494  16.243 -16.570  1.00 17.28 A
ATOM    1996  O    GLY A 332      80.381  17.013 -16.934  1.00 16.11 A
ATOM    1997  N    TYR A 333      79.701  15.151 -15.842  1.00 16.52 A
ATOM    1998  CA   TYR A 333      80.997  14.791 -15.305  1.00 16.75 A
ATOM    1999  CB   TYR A 333      80.787  13.854 -14.115  1.00 16.95 A
ATOM    2000  CG   TYR A 333      80.369  14.624 -12.893  1.00 18.08 A
ATOM    2001  CD1  TYR A 333      81.332  15.207 -12.059  1.00 18.77 A
ATOM    2002  CE1  TYR A 333      80.971  16.035 -10.982  1.00 17.69 A
ATOM    2003  CD2  TYR A 333      79.021  14.877 -12.620  1.00 17.08 A
ATOM    2004  CE2  TYR A 333      78.646  15.713 -11.538  1.00 19.05 A
ATOM    2005  CZ   TYR A 333      79.640  16.287 -10.728  1.00 18.04 A
ATOM    2006  OH   TYR A 333      79.322  17.126  -9.682  1.00 18.69 A
ATOM    2007  C    TYR A 333      82.051  14.240 -16.238  1.00 16.78 A
ATOM    2008  O    TYR A 333      83.248  14.393 -15.977  1.00 16.56 A
ATOM    2009  N    GLY A 334      81.633  13.598 -17.321  1.00 16.63 A
ATOM    2010  CA   GLY A 334      82.624  13.082 -18.244  1.00 17.02 A
ATOM    2011  C    GLY A 334      83.576  14.194 -18.683  1.00 17.47 A
ATOM    2012  O    GLY A 334      84.802  14.063 -18.562  1.00 17.18 A
ATOM    2013  N    PRO A 335      83.039  15.315 -19.195  1.00 17.04 A
ATOM    2014  CD   PRO A 335      81.650  15.611 -19.590  1.00 16.18 A
ATOM    2015  CA   PRO A 335      83.940  16.382 -19.621  1.00 17.35 A
ATOM    2016  CB   PRO A 335      82.991  17.441 -20.178  1.00 17.48 A
ATOM    2017  CG   PRO A 335      81.857  16.605 -20.713  1.00 18.64 A
ATOM    2018  C    PRO A 335      84.786  16.883 -18.480  1.00 18.48 A
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      ATOM   2019  O    PRO A 335      85.963  17.131 -18.661  1.00 20.84 A
      ATOM   2020  N    LEU A 336      84.204  17.034 -17.299  1.00 19.46 A
      ATOM   2021  CA   LEU A 336      84.986  17.504 -16.153  1.00 19.38 A
      ATOM   2022  CB   LEU A 336      84.071  17.692 -14.937  1.00 18.98 A
   5  ATOM   2023  CG   LEU A 336      84.765  17.982 -13.604  1.00 18.01 A
      ATOM   2024  CD1  LEU A 336      85.534  19.289 -13.690  1.00 16.66 A
      ATOM   2025  CD2  LEU A 336      83.724  18.055 -12.491  1.00 18.81 A
      ATOM   2026  C    LEU A 336      86.132  16.528 -15.815  1.00 19.32 A
      ATOM   2027  O    LEU A 336      87.293  16.932 -15.683  1.00 18.65 A
  10  ATOM   2028  N    LYS A 337      85.808  15.244 -15.688  1.00 18.38 A
      ATOM   2029  CA   LYS A 337      86.821  14.240 -15.387  1.00 18.89 A
      ATOM   2030  CB   LYS A 337      86.147  12.900 -15.082  1.00 17.70 A
      ATOM   2031  CG   LYS A 337      85.460  12.933 -13.727  1.00 19.89 A
      ATOM   2032  CD   LYS A 337      84.450  11.817 -13.523  1.00 22.66 A
  15  ATOM   2033  CE   LYS A 337      85.089  10.453 -13.372  1.00 22.78 A
      ATOM   2034  NZ   LYS A 337      84.025   9.444 -13.088  1.00 25.28 A
      ATOM   2035  C    LYS A 337      87.865  14.101 -16.504  1.00 20.07 A
      ATOM   2036  O    LYS A 337      88.996  13.671 -16.254  1.00 20.47 A
      ATOM   2037  N    ALA A 338      87.491  14.486 -17.725  1.00 20.38 A
  20  ATOM   2038  CA   ALA A 338      88.393  14.441 -18.876  1.00 20.65 A
      ATOM   2039  CB   ALA A 338      87.580  14.382 -20.178  1.00 20.29 A
      ATOM   2040  C    ALA A 338      89.357  15.636 -18.933  1.00 22.18 A
      ATOM   2041  O    ALA A 338      90.265  15.665 -19.768  1.00 24.71 A
      ATOM   2042  N    HIS A 339      89.179  16.627 -18.063  1.00 21.90 A
  25  ATOM   2043  CA   HIS A 339      90.072  17.785 -18.094  1.00 22.10 A
      ATOM   2044  CB   HIS A 339      89.711  18.762 -16.989  1.00 21.35 A
      ATOM   2045  CG   HIS A 339      90.357  20.097 -17.149  1.00 20.57 A
      ATOM   2046  CD2  HIS A 339      89.891  21.251 -17.683  1.00 19.19 A
      ATOM   2047  ND1  HIS A 339      91.664  20.341 -16.783  1.00 20.52 A
  30  ATOM   2048  CE1  HIS A 339      91.973  21.592 -17.085  1.00 22.28 A
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      ATOM   2050  C    HIS A 339      91.555  17.404 -17.963  1.00 22.78 A
      ATOM   2051  O    HIS A 339      91.919  16.600 -17.118  1.00 21.05 A
      ATOM   2052  N    PRO A 340      92.425  17.994 -18.801  1.00 24.12 A
  35  ATOM   2053  CD   PRO A 340      92.090  18.973 -19.855  1.00 23.53 A
      ATOM   2054  CA   PRO A 340      93.872  17.724 -18.795  1.00 25.11 A
      ATOM   2055  CB   PRO A 340      94.435  18.864 -19.647  1.00 22.31 A
      ATOM   2056  CG   PRO A 340      93.379  19.015 -20.685  1.00 22.50 A
      ATOM   2057  C    PRO A 340      94.540  17.654 -17.421  1.00 25.66 A
  40  ATOM   2058  O    PRO A 340      95.523  16.951 -17.237  1.00 27.43 A
      ATOM   2059  N    PHE A 341      94.011  18.389 -16.459  1.00 25.05 A
      ATOM   2060  CA   PHE A 341      94.596  18.399 -15.139  1.00 24.88 A
      ATOM   2061  CB   PHE A 341      93.897  19.459 -14.276  1.00 24.71 A
      ATOM   2062  CG   PHE A 341      94.482  19.607 -12.893  1.00 24.42 A
  45  ATOM   2063  CD1  PHE A 341      95.822  19.947 -12.721  1.00 22.55 A
      ATOM   2064  CD2  PHE A 341      93.685  19.397 -11.758  1.00 22.61 A
      ATOM   2065  CE1  PHE A 341      96.364  20.076 -11.434  1.00 23.65 A
      ATOM   2066  CE2  PHE A 341      94.204  19.522 -10.476  1.00 22.09 A
      ATOM   2067  CZ   PHE A 341      95.547  19.863 -10.304  1.00 24.01 A
  50  ATOM   2068  C    PHE A 341      94.511  17.026 -14.486  1.00 25.70 A
      ATOM   2069  O    PHE A 341      95.363  16.665 -13.680  1.00 27.11 A
      ATOM   2070  N    PHE A 342      93.499  16.258 -14.865  1.00 25.51 A
      ATOM   2071  CA   PHE A 342      93.262  14.929 -14.318  1.00 25.34 A
      ATOM   2072  CB   PHE A 342      91.758  14.728 -14.120  1.00 21.93 A
  55  ATOM   2073  CG   PHE A 342      91.120  15.728 -13.196  1.00 20.26 A
      ATOM   2074  CD1  PHE A 342      91.556  15.862 -11.888  1.00 20.03 A
      ATOM   2075  CD2  PHE A 342      90.030  16.485 -13.613  1.00 19.36 A
      ATOM   2076  CE1  PHE A 342      90.907  16.731 -11.004  1.00 19.87 A
      ATOM   2077  CE2  PHE A 342      89.377  17.348 -12.744  1.00 18.17 A
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	ATOM	2078	CZ	PHE A 342	89.818	17.470	-11.431	1.00	19.27 A
	ATOM	2079	C	PHE A 342	93.805	13.815	-15.214	1.00	27.64 A
	ATOM	2080	O	PHE A 342	93.508	12.630	-15.019	1.00	27.39 A
	ATOM	2081	N	GLU A 343	94.607	14.203	-16.194	1.00	31.32 A
5	ATOM	2082	CA	GLU A 343	95.185	13.262	-17.150	1.00	34.29 A
	ATOM	2083	CB	GLU A 343	96.320	13.950	-17.889	1.00	38.36 A
	ATOM	2084	CG	GLU A 343	96.735	13.314	-19.197	1.00	45.23 A
	ATOM	2085	CD	GLU A 343	97.654	14.247	-19.976	1.00	51.01 A
	ATOM	2086	OE1	GLU A 343	98.266	13.801	-20.981	1.00	51.76 A
10	ATOM	2087	OE2	GLU A 343	97.755	15.439	-19.568	1.00	52.42 A
	ATOM	2088	C	GLU A 343	95.690	11.950	-16.542	1.00	33.50 A
	ATOM	2089	O	GLU A 343	95.289	10.860	-16.970	1.00	33.57 A
	ATOM	2090	N	SER A 344	96.554	12.049	-15.537	1.00	31.58 A
	ATOM	2091	CA	SER A 344	97.117	10.857	-14.906	1.00	30.38 A
15	ATOM	2092	CB	SER A 344	98.447	11.217	-14.253	1.00	29.76 A
	ATOM	2093	OG	SER A 344	98.243	11.995	-13.096	1.00	30.32 A
	ATOM	2094	C	SER A 344	96.242	10.150	-13.857	1.00	30.00 A
	ATOM	2095	O	SER A 344	96.662	9.137	-13.285	1.00	31.14 A
	ATOM	2096	N	VAL A 345	95.046	10.679	-13.606	1.00	27.28 A
20	ATOM	2097	CA	VAL A 345	94.135	10.126	-12.609	1.00	25.39 A
	ATOM	2098	CB	VAL A 345	93.093	11.213	-12.159	1.00	24.17 A
	ATOM	2099	CG1	VAL A 345	91.973	10.568	-11.347	1.00	19.50 A
	ATOM	2100	CG2	VAL A 345	93.779	12.321	-11.363	1.00	17.85 A
	ATOM	2101	C	VAL A 345	93.341	8.885	-13.043	1.00	26.45 A
25	ATOM	2102	O	VAL A 345	92.813	8.842	-14.154	1.00	27.42 A
	ATOM	2103	N	THR A 346	93.253	7.890	-12.157	1.00	26.62 A
	ATOM	2104	CA	THR A 346	92.451	6.680	-12.406	1.00	27.91 A
	ATOM	2105	CB	THR A 346	93.194	5.388	-11.999	1.00	29.18 A
	ATOM	2106	OG1	THR A 346	94.345	5.224	-12.830	1.00	33.51 A
30	ATOM	2107	CG2	THR A 346	92.300	4.171	-12.177	1.00	28.24 A
	ATOM	2108	C	THR A 346	91.229	6.856	-11.505	1.00	27.53 A
	ATOM	2109	O	THR A 346	91.297	6.621	-10.299	1.00	29.24 A
	ATOM	2110	N	TRP A 347	90.117	7.279	-12.094	1.00	27.83 A
35	ATOM	2111	CA	TRP A 347	88.898	7.561	-11.336	1.00	29.15 A
	ATOM	2112	CB	TRP A 347	87.878	8.278	-12.224	1.00	27.12 A
	ATOM	2113	CG	TRP A 347	88.353	9.574	-12.758	1.00	25.48 A
	ATOM	2114	CD2	TRP A 347	88.252	10.853	-12.118	1.00	24.27 A
	ATOM	2115	CE2	TRP A 347	88.841	11.803	-12.990	1.00	23.82 A
	ATOM	2116	CE3	TRP A 347	87.723	11.292	-10.897	1.00	22.42 A
40	ATOM	2117	CD1	TRP A 347	88.984	9.788	-13.952	1.00	24.47 A
	ATOM	2118	NE1	TRP A 347	89.279	11.124	-14.099	1.00	23.92 A
	ATOM	2119	CZ2	TRP A 347	88.913	13.169	-12.678	1.00	21.68 A
	ATOM	2120	CZ3	TRP A 347	87.797	12.654	-10.586	1.00	22.14 A
	ATOM	2121	CH2	TRP A 347	88.391	13.575	-11.480	1.00	22.35 A
45	ATOM	2122	C	TRP A 347	88.218	6.370	-10.700	1.00	30.64 A
	ATOM	2123	O	TRP A 347	87.617	6.476	-9.631	1.00	31.21 A
	ATOM	2124	N	GLU A 348	88.318	5.242	-11.376	1.00	32.16 A
	ATOM	2125	CA	GLU A 348	87.698	4.003	-10.952	1.00	34.98 A
	ATOM	2126	CB	GLU A 348	88.157	2.890	-11.904	1.00	37.47 A
50	ATOM	2127	CG	GLU A 348	87.815	3.125	-13.419	1.00	41.39 A
	ATOM	2128	CD	GLU A 348	88.619	4.257	-14.116	1.00	41.83 A
	ATOM	2129	OE1	GLU A 348	89.828	4.408	-13.841	1.00	42.27 A
	ATOM	2130	OE2	GLU A 348	88.036	4.982	-14.959	1.00	42.41 A
	ATOM	2131	C	GLU A 348	87.843	3.547	-9.478	1.00	34.74 A
55	ATOM	2132	O	GLU A 348	86.866	3.111	-8.869	1.00	35.95 A
	ATOM	2133	N	ASN A 349	89.024	3.652	-8.887	1.00	33.61 A
	ATOM	2134	CA	ASN A 349	89.189	3.179	-7.507	1.00	32.34 A
	ATOM	2135	CB	ASN A 349	89.936	1.860	-7.529	1.00	33.21 A
	ATOM	2136	CG	ASN A 349	91.345	2.016	-8.089	1.00	34.48 A

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      ATOM   2137  OD1 ASN A 349      91.613   2.943  -8.858  1.00 32.91 A
      ATOM   2138  ND2 ASN A 349      92.247   1.110  -7.712  1.00 35.85 A
      ATOM   2139  C   ASN A 349      89.949   4.136  -6.594  1.00 31.22 A
      ATOM   2140  O   ASN A 349      90.826   3.714  -5.839  1.00 30.00 A
   5  ATOM   2141  N   LEU A 350      89.611   5.416  -6.646  1.00 28.54 A
      ATOM   2142  CA  LEU A 350      90.300   6.403  -5.837  1.00 26.75 A
      ATOM   2143  CB  LEU A 350      89.632   7.762  -6.024  1.00 25.89 A
      ATOM   2144  CG  LEU A 350      90.095   8.558  -7.239  1.00 24.21 A
      ATOM   2145  CD1 LEU A 350      89.111   9.674  -7.547  1.00 23.55 A
  10  ATOM   2146  CD2 LEU A 350      91.475   9.118  -6.932  1.00 23.67 A
      ATOM   2147  C   LEU A 350      90.440   6.102  -4.345  1.00 27.67 A
      ATOM   2148  O   LEU A 350      91.478   6.401  -3.753  1.00 28.06 A
      ATOM   2149  N   HIS A 351      89.424   5.509  -3.722  1.00 27.81 A
      ATOM   2150  CA  HIS A 351      89.539   5.254  -2.299  1.00 29.88 A
  15  ATOM   2151  CB  HIS A 351      88.144   5.197  -1.646  1.00 31.47 A
      ATOM   2152  CG  HIS A 351      87.584   3.823  -1.475  1.00 32.65 A
      ATOM   2153  CD2 HIS A 351      86.926   3.009  -2.338  1.00 34.75 A
      ATOM   2154  ND1 HIS A 351      87.629   3.150  -0.273  1.00 34.31 A
      ATOM   2155  CE1 HIS A 351      87.022   1.981  -0.402  1.00 36.41 A
  20  ATOM   2156  NE2 HIS A 351      86.586   1.871  -1.644  1.00 35.36 A
      ATOM   2157  C   HIS A 351      90.396   4.030  -1.978  1.00 30.93 A
      ATOM   2158  O   HIS A 351      90.674   3.741  -0.812  1.00 31.57 A
      ATOM   2159  N   GLN A 352      90.842   3.337  -3.022  1.00 31.09 A
      ATOM   2160  CA  GLN A 352      91.709   2.177  -2.864  1.00 31.86 A
  25  ATOM   2161  CB  GLN A 352      91.482   1.187  -3.992  1.00 35.63 A
      ATOM   2162  CG  GLN A 352      91.038  -0.141  -3.497  1.00 40.62 A
      ATOM   2163  CD  GLN A 352      89.739  -0.036  -2.766  1.00 42.39 A
      ATOM   2164  OE1 GLN A 352      88.684   0.133  -3.376  1.00 44.19 A
      ATOM   2165  NE2 GLN A 352      89.802  -0.112  -1.447  1.00 44.81 A
  30  ATOM   2166  C   GLN A 352      93.167   2.626  -2.907  1.00 31.39 A
      ATOM   2167  O   GLN A 352      94.030   2.022  -2.271  1.00 31.44 A
      ATOM   2168  N   GLN A 353      93.429   3.685  -3.672  1.00 29.13 A
      ATOM   2169  CA  GLN A 353      94.769   4.237  -3.813  1.00 27.37 A
      ATOM   2170  CB  GLN A 353      94.767   5.283  -4.932  1.00 25.81 A
  35  ATOM   2171  CG  GLN A 353      94.250   4.702  -6.242  1.00 26.68 A
      ATOM   2172  CD  GLN A 353      94.035   5.738  -7.330  1.00 26.81 A
      ATOM   2173  OE1 GLN A 353      94.792   6.709  -7.435  1.00 25.21 A
      ATOM   2174  NE2 GLN A 353      93.011   5.520  -8.171  1.00 24.24 A
      ATOM   2175  C   GLN A 353      95.288   4.851  -2.510  1.00 28.25 A
  40  ATOM   2176  O   GLN A 353      94.511   5.245  -1.633  1.00 28.38 A
      ATOM   2177  N   THR A 354      96.608   4.907  -2.375  1.00 28.16 A
      ATOM   2178  CA  THR A 354      97.220   5.489  -1.193  1.00 28.54 A
      ATOM   2179  CB  THR A 354      98.564   4.848  -0.889  1.00 29.50 A
      ATOM   2180  OG1 THR A 354      98.354   3.459  -0.624  1.00 31.62 A
  45  ATOM   2181  CG2 THR A 354      99.225   5.517   0.334  1.00 27.68 A
      ATOM   2182  C   THR A 354      97.438   6.955  -1.468  1.00 27.76 A
      ATOM   2183  O   THR A 354      98.062   7.307  -2.453  1.00 27.12 A
      ATOM   2184  N   PRO A 355      96.928   7.832  -0.592  1.00 28.37 A
      ATOM   2185  CD  PRO A 355      96.067   7.582   0.573  1.00 27.67 A
  50  ATOM   2186  CA  PRO A 355      97.092   9.266  -0.802  1.00 28.53 A
      ATOM   2187  CB  PRO A 355      96.215   9.883   0.291  1.00 28.32 A
      ATOM   2188  CG  PRO A 355      95.210   8.807   0.579  1.00 28.38 A
      ATOM   2189  C   PRO A 355      98.528   9.724  -0.695  1.00 29.42 A
      ATOM   2190  O   PRO A 355      99.290   9.232   0.139  1.00 29.42 A
  55  ATOM   2191  N   PRO A 356      98.916  10.676  -1.548  1.00 28.20 A
      ATOM   2192  CD  PRO A 356      98.083  11.340  -2.567  1.00 27.35 A
      ATOM   2193  CA  PRO A 356     100.276  11.213  -1.539  1.00 28.63 A
      ATOM   2194  CB  PRO A 356     100.261  12.199  -2.712  1.00 29.02 A
      ATOM   2195  CG  PRO A 356      98.815  12.633  -2.781  1.00 27.44 A
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ATOM   2196  C    PRO A 356      100.483  11.899  -0.195  1.00 29.18 A
ATOM   2197  O    PRO A 356       99.543  12.505   0.331  1.00 28.80 A
ATOM   2198  N    ALA A 357      101.689  11.806   0.368  1.00 29.69 A
ATOM   2199  CA   ALA A 357      101.942  12.439   1.664  1.00 31.97 A
ATOM   2200  CB   ALA A 357      103.273  11.964   2.253  1.00 29.11 A
ATOM   2201  C    ALA A 357      101.928  13.964   1.528  1.00 33.61 A
ATOM   2202  O    ALA A 357      102.371  14.507   0.520  1.00 33.81 A
ATOM   2203  N    LEU A 358      101.390  14.645   2.540  1.00 36.37 A
ATOM   2204  CA   LEU A 358      101.295  16.110   2.543  1.00 38.03 A
ATOM   2205  CB   LEU A 358       99.995  16.554   3.209  1.00 36.49 A
ATOM   2206  CG   LEU A 358       98.679  16.059   2.641  1.00 35.57 A
ATOM   2207  CD1  LEU A 358       97.568  16.398   3.620  1.00 35.78 A
ATOM   2208  CD2  LEU A 358       98.443  16.689   1.278  1.00 37.10 A
ATOM   2209  C    LEU A 358      102.460  16.743   3.310  1.00 39.05 A
ATOM   2210  O    LEU A 358      102.451  16.592   4.553  1.00 39.24 A
ATOM   2211  OXT  LEU A 358      103.348  17.370   2.679  1.00 40.12 A
ATOM   2212  OH2  TIP S   1       82.347  32.462  -3.850  1.00 16.08 S
ATOM   2213  OH2  TIP S   4       80.761  19.051 -18.244  1.00 23.37 S
ATOM   2214  OH2  TIP S   7       79.269  13.051 -18.353  1.00 22.32 S
ATOM   2215  OH2  TIP S   8       86.710  32.919  -1.646  1.00 24.05 S
ATOM   2216  OH2  TIP S   9       78.564  -0.823  16.465  1.00 28.00 S
ATOM   2217  OH2  TIP S  10       75.323  16.274   8.538  1.00 18.43 S
ATOM   2218  OH2  TIP S  12       78.540  24.328  -2.128  1.00 27.08 S
ATOM   2219  OH2  TIP S  13       91.533  13.928 -17.231  1.00 22.56 S
ATOM   2220  OH2  TIP S  14       77.419  -0.445  24.044  1.00 23.98 S
ATOM   2221  OH2  TIP S  19       72.498  40.164  -3.114  1.00 21.78 S
ATOM   2222  OH2  TIP S  20       77.303  13.198 -15.393  1.00 22.49 S
ATOM   2223  OH2  TIP S  21       75.600  -1.063  22.040  1.00 24.12 S
ATOM   2224  OH2  TIP S  22       90.133  19.697  12.606  1.00 16.61 S
ATOM   2225  OH2  TIP S  24       74.810   7.002   5.700  1.00 20.66 S
ATOM   2226  OH2  TIP S  27       74.894   8.778  -8.074  1.00 23.31 S
ATOM   2227  OH2  TIP S  28       80.070  33.741 -17.170  1.00 27.29 S
ATOM   2228  OH2  TIP S  31       74.744  21.007   3.348  1.00 29.98 S
ATOM   2229  OH2  TIP S  32       97.930  12.301   2.472  1.00 16.75 S
ATOM   2230  OH2  TIP S  35       78.412   7.338   3.002  1.00 16.51 S
ATOM   2231  OH2  TIP S  36       80.172  27.171   1.300  1.00 34.66 S
ATOM   2232  OH2  TIP S  41       69.773   3.412  17.444  1.00 24.08 S
ATOM   2233  OH2  TIP S  43       88.878   7.904  10.616  1.00 20.34 S
ATOM   2234  OH2  TIP S  44       87.375  32.487 -13.928  1.00 31.99 S
ATOM   2235  OH2  TIP S  45       91.671  10.803 -16.123  1.00 35.59 S
ATOM   2236  OH2  TIP S  46       87.637  11.564  23.703  1.00 22.67 S
ATOM   2237  OH2  TIP S  48       93.353  28.739   3.547  1.00 32.79 S
ATOM   2238  OH2  TIP S  50       82.283  34.597 -16.032  1.00 23.90 S
ATOM   2239  OH2  TIP S  52       81.673   8.965  -8.348  1.00 27.83 S
ATOM   2240  OH2  TIP S  55       94.012   3.488   1.399  1.00 24.78 S
ATOM   2241  OH2  TIP S  58       85.735  11.257 -18.436  1.00 27.15 S
ATOM   2242  OH2  TIP S  61       79.069  -4.638  12.345  1.00 27.07 S
ATOM   2243  OH2  TIP S  64      103.981  17.563  -7.228  1.00 28.86 S
ATOM   2244  OH2  TIP S  66       79.020  43.119   5.431  1.00 35.33 S
ATOM   2245  OH2  TIP S  69       88.177  36.956   3.079  1.00 30.87 S
ATOM   2246  OH2  TIP S  75       78.707  27.486  -3.439  1.00 25.25 S
ATOM   2247  OH2  TIP S  79       80.347  33.345   6.422  1.00 38.57 S
ATOM   2248  OH2  TIP S  84       64.594  19.493  24.406  1.00 26.01 S
ATOM   2249  OH2  TIP S  98       70.215  21.980  19.413  1.00 24.75 S
ATOM   2250  OH2  TIP S 116      103.456  14.637  -2.925  1.00 41.84 S
ATOM   2251  OH2  TIP S 120       97.528  14.189 -14.706  1.00 43.27 S
ATOM   2252  OH2  TIP S 128      103.602  10.418  -1.388  1.00 37.07 S
ATOM   2253  OH2  TIP S 129       83.353  33.273   4.410  1.00 34.78 S
ATOM   2254  OH2  TIP S 130       74.116   4.597  -3.022  1.00 27.69 S
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	ATOM	2255	OH2	TIP	S	131	73.104	-1.689	21.760	1.00	32.76	S
	ATOM	2256	OH2	TIP	S	133	101.510	19.036	-1.083	1.00	28.30	S
	ATOM	2257	OH2	TIP	S	134	65.138	6.209	20.472	1.00	27.43	S
	ATOM	2258	OH2	TIP	S	135	94.509	36.623	-12.734	1.00	40.27	S
5	ATOM	2259	OH2	TIP	S	136	76.896	11.412	-17.698	1.00	37.17	S
	ATOM	2260	OH2	TIP	S	137	97.379	7.497	-6.673	1.00	41.53	S
	ATOM	2261	OH2	TIP	S	138	62.239	17.934	24.368	1.00	34.35	S
	ATOM	2262	OH2	TIP	S	139	69.630	14.360	-10.771	1.00	40.77	S
	ATOM	2263	OH2	TIP	S	140	84.554	44.493	-2.658	1.00	24.74	S
10	ATOM	2264	OH2	TIP	S	141	94.631	8.129	-9.752	1.00	35.45	S
	ATOM	2265	OH2	TIP	S	142	78.415	1.021	3.883	1.00	28.60	S
	ATOM	2266	OH2	TIP	S	143	99.830	12.987	-10.148	1.00	35.79	S
	ATOM	2267	OH2	TIP	S	144	71.235	20.688	11.365	1.00	51.52	S
	ATOM	2268	OH2	TIP	S	145	87.138	25.623	11.165	1.00	41.92	S
15	ATOM	2269	OH2	TIP	S	146	60.803	15.332	23.294	1.00	32.69	S
	ATOM	2270	OH2	TIP	S	148	73.970	32.165	-13.455	1.00	33.12	S
	ATOM	2271	OH2	TIP	S	149	88.146	19.004	17.326	1.00	27.60	S
	ATOM	2272	OH2	TIP	S	150	90.803	9.970	18.127	1.00	35.03	S
	ATOM	2273	OH2	TIP	S	153	86.261	32.393	-16.403	1.00	41.89	S
20	ATOM	2274	OH2	TIP	S	155	102.147	7.767	-0.215	1.00	38.83	S
	ATOM	2275	OH2	TIP	S	159	95.238	0.811	-7.614	1.00	47.22	S
	ATOM	2276	OH2	TIP	S	163	92.356	36.543	-5.580	1.00	40.19	S
	ATOM	2277	OH2	TIP	S	172	66.640	4.633	22.314	1.00	29.95	S
	ATOM	2278	OH2	TIP	S	176	99.303	9.124	3.136	1.00	37.07	S
25	ATOM	2279	OH2	TIP	S	184	104.566	20.517	-7.318	1.00	40.83	S
	ATOM	2280	OH2	TIP	S	185	90.295	6.390	-15.433	1.00	34.81	S
	ATOM	2281	OH2	TIP	S	186	82.626	12.831	8.023	1.00	23.99	S
	ATOM	2282	OH2	TIP	S	187	86.159	18.737	24.618	1.00	32.12	S
	ATOM	2283	OH2	TIP	S	188	79.867	7.010	-7.877	1.00	28.52	S
30	ATOM	2284	OH2	TIP	S	189	88.469	4.967	1.404	1.00	41.92	S
	ATOM	2285	OH2	TIP	S	190	95.628	28.435	-17.705	1.00	31.73	S
	ATOM	2286	OH2	TIP	S	191	76.228	7.822	28.547	1.00	36.76	S
	ATOM	2287	OH2	TIP	S	192	85.930	8.936	23.323	1.00	31.58	S
	ATOM	2288	OH2	TIP	S	193	73.669	24.555	-14.317	1.00	34.12	S
35	ATOM	2289	OH2	TIP	S	194	99.847	12.959	4.319	1.00	43.06	S
	ATOM	2290	OH2	TIP	S	195	76.225	28.669	-3.386	1.00	38.83	S
	ATOM	2291	OH2	TIP	S	197	76.955	24.214	20.057	1.00	35.16	S
	ATOM	2292	OH2	TIP	S	198	65.723	11.313	28.926	1.00	38.40	S
	ATOM	2293	OH2	TIP	S	199	88.482	28.463	4.472	1.00	29.21	S
40	ATOM	2294	OH2	TIP	S	200	71.017	17.440	-13.980	1.00	37.15	S
	ATOM	2295	OH2	TIP	S	201	64.967	12.265	13.947	1.00	55.03	S
	ATOM	2296	OH2	TIP	S	204	99.611	22.229	-14.818	1.00	46.97	S
	ATOM	2297	OH2	TIP	S	205	65.422	-1.944	20.970	1.00	65.13	S
	ATOM	2298	OH2	TIP	S	210	89.648	5.683	12.672	1.00	38.65	S
45	ATOM	2299	OH2	TIP	S	213	80.842	40.555	7.721	1.00	37.38	S
	ATOM	2300	OH2	TIP	S	214	77.452	22.142	23.411	1.00	36.35	S
	ATOM	2301	OH2	TIP	S	216	104.280	21.111	-10.347	1.00	35.15	S
	ATOM	2302	OH2	TIP	S	225	84.900	44.787	-5.575	1.00	36.10	S
	ATOM	2303	OH2	TIP	S	230	74.759	19.808	9.165	1.00	29.27	S
50	ATOM	2304	OH2	TIP	S	231	76.375	2.991	-2.919	1.00	33.34	S
	ATOM	2305	OH2	TIP	S	232	97.252	36.990	-15.430	1.00	29.40	S
	ATOM	2306	OH2	TIP	S	233	70.180	4.692	8.907	1.00	29.97	S
	ATOM	2307	OH2	TIP	S	234	96.055	11.349	-8.926	1.00	29.40	S
	ATOM	2308	OH2	TIP	S	235	70.916	31.535	4.186	1.00	53.99	S
55	ATOM	2309	OH2	TIP	S	236	83.279	23.905	15.245	1.00	40.79	S
	ATOM	2310	OH2	TIP	S	237	90.441	34.500	3.752	1.00	37.91	S
	ATOM	2311	OH2	TIP	S	238	74.369	15.521	-11.954	1.00	36.85	S
	ATOM	2312	OH2	TIP	S	239	82.630	5.971	5.382	1.00	48.63	S
	ATOM	2313	OH2	TIP	S	240	101.866	29.649	1.029	1.00	48.93	S

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     ATOM   2314   O12 GLC G    2      74.980  15.310  28.834  1.00 58.25 G
     ATOM   2315   C11 GLC G    2      74.113  15.072  27.724  1.00 58.49 G
     ATOM   2316   C13 GLC G    2      74.885  14.362  26.609  1.00 58.11 G
     ATOM   2317   O14 GLC G    2      73.990  14.120  25.524  1.00 58.57 G
  5  ATOM   2318   C15 GLC G    2      75.438  13.023  27.096  1.00 57.55 G
     ATOM   2319   O16 GLC G    2      74.357  12.183  27.507  1.00 57.24 G
     ATOM   2320   O12 GLC G    3      68.191   4.312  13.268  1.00 63.76 G
     ATOM   2321   C11 GLC G    3      67.998   3.273  14.231  1.00 63.57 G
     ATOM   2322   C13 GLC G    3      69.274   2.429  14.330  1.00 64.06 G
 10  ATOM   2323   O14 GLC G    3      69.570   1.858  13.049  1.00 62.75 G
     ATOM   2324   C15 GLC G    3      69.094   1.303  15.364  1.00 63.85 G
     ATOM   2325   O16 GLC G    3      68.010   0.444  14.978  1.00 65.65 G
     ATOM   2326   O12 GLC G    4      87.921  37.473 -13.378  1.00 46.73 G
     ATOM   2327   C11 GLC G    4      88.767  36.757 -14.265  1.00 46.84 G
 15  ATOM   2328   C13 GLC G    4      90.050  36.439 -13.526  1.00 46.74 G
     ATOM   2329   O14 GLC G    4      90.660  37.648 -13.104  1.00 46.91 G
     ATOM   2330   C15 GLC G    4      90.999  35.678 -14.435  1.00 47.60 G
     ATOM   2331   O16 GLC G    4      92.193  35.413 -13.700  1.00 50.48 G
     ATOM   2332   O12 GLC G    6      78.608   8.519  28.683  1.00 42.02 G
 20  ATOM   2333   C11 GLC G    6      79.227   8.721  29.956  1.00 44.70 G
     ATOM   2334   C13 GLC G    6      80.218   9.877  29.849  1.00 45.13 G
     ATOM   2335   O14 GLC G    6      81.208   9.537  28.896  1.00 47.43 G
     ATOM   2336   C15 GLC G    6      80.904  10.129  31.180  1.00 46.92 G
     ATOM   2337   O16 GLC G    6      81.611   8.950  31.564  1.00 49.38 G
 25  ATOM   2338   O12 GLC G    8      83.278   5.163  12.485  1.00 46.74 G
     ATOM   2339   C11 GLC G    8      82.460   3.987  12.559  1.00 50.09 G
     ATOM   2340   C13 GLC G    8      83.236   2.894  13.286  1.00 50.09 G
     ATOM   2341   O14 GLC G    8      84.408   2.621  12.529  1.00 50.75 G
     ATOM   2342   C15 GLC G    8      82.412   1.597  13.414  1.00 52.04 G
 30  ATOM   2343   O16 GLC G    8      82.051   1.062  12.130  1.00 53.37 G
     ATOM   2344   O12 GLC G   10      87.146   4.682  -5.006  1.00 25.46 G
     ATOM   2345   C11 GLC G   10      85.823   5.086  -5.356  1.00 27.64 G
     ATOM   2346   C13 GLC G   10      85.782   5.498  -6.835  1.00 30.79 G
     ATOM   2347   O14 GLC G   10      86.689   6.600  -7.069  1.00 29.47 G
 35  ATOM   2348   C15 GLC G   10      84.354   5.916  -7.219  1.00 30.60 G
     ATOM   2349   O16 GLC G   10      83.947   7.022  -6.417  1.00 31.23 G
     ATOM   2350   CBI DRG L    1      82.223  19.878   9.473  1.00 17.56 L
     ATOM   2351   OBH DRG L    1      82.835  19.573  10.730  1.00 20.33 L
     ATOM   2352   CBG DRG L    1      82.419  20.512  11.733  1.00 17.87 L
 40  ATOM   2353   CBF DRG L    1      83.661  21.291  12.177  1.00 16.47 L
     ATOM   2354   NBK DRG L    1      84.171  22.133  11.085  1.00 15.68 L
     ATOM   2355   CBJ DRG L    1      83.683  23.479  10.751  1.00 12.47 L
     ATOM   2356   CBE DRG L    1      84.739  20.294  12.600  1.00 16.76 L
     ATOM   2357   CBA DRG L    1      84.178  19.405  13.715  1.00 18.27 L
 45  ATOM   2358   OBB DRG L    1      82.790  19.632  14.017  1.00 18.38 L
     ATOM   2359   CBC DRG L    1      81.853  19.747  12.937  1.00 18.62 L
     ATOM   2360   CBD DRG L    1      80.732  20.611  13.524  1.00 14.59 L
     ATOM   2361   NAW DRG L    1      81.398  18.547  12.551  1.00 18.60 L
     ATOM   2362   CAX DRG L    1      80.185  18.344  12.014  1.00 15.55 L
 50  ATOM   2363   CAY DRG L    1      79.107  19.141  11.643  1.00 13.82 L
     ATOM   2364   CAZ DRG L    1      77.988  18.555  11.053  1.00 16.37 L
     ATOM   2365   CAP DRG L    1      77.930  17.180  10.830  1.00 15.88 L
     ATOM   2366   CAO DRG L    1      78.999  16.366  11.196  1.00 15.07 L
     ATOM   2367   CAN DRG L    1      80.107  16.973  11.783  1.00 17.80 L
 55  ATOM   2368   CAM DRG L    1      81.290  16.377  12.187  1.00 19.34 L
     ATOM   2369   CAH DRG L    1      81.811  15.087  12.083  1.00 19.93 L
     ATOM   2370   CAV DRG L    1      82.083  17.407  12.657  1.00 18.53 L
     ATOM   2371   CAU DRG L    1      83.404  17.144  13.014  1.00 18.70 L
     ATOM   2372   NAT DRG L    1      84.365  17.964  13.438  1.00 17.82 L
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     ATOM   2373  CAS DRG L   1       85.523  17.317  13.610  1.00 15.80 L
     ATOM   2374  CAR DRG L   1       86.807  17.682  14.000  1.00 14.23 L
     ATOM   2375  CAQ DRG L   1       87.803  16.708  14.047  1.00 13.92 L
     ATOM   2376  CAI DRG L   1       87.526  15.384  13.714  1.00 16.21 L
   5 ATOM   2377  CAJ DRG L   1       86.244  15.003  13.324  1.00 16.43 L
     ATOM   2378  CAK DRG L   1       85.264  15.988  13.278  1.00 17.76 L
     ATOM   2379  CAL DRG L   1       83.932  15.867  12.904  1.00 18.99 L
     ATOM   2380  CAG DRG L   1       83.130  14.829  12.439  1.00 19.47 L
     ATOM   2381  CAC DRG L   1       83.403  13.472  12.290  1.00 18.70 L
  10 ATOM   2382  OAB DRG L   1       84.471  12.895  12.480  1.00 18.10 L
     ATOM   2383  NAD DRG L   1       82.277  12.904  11.856  1.00 18.49 L
     ATOM   2384  CAE DRG L   1       81.128  13.799  11.622  1.00 20.08 L
     ATOM   2385  OAF DRG L   1       80.902  13.891  10.214  1.00 24.92 L
     ATOM   2386  S   SO4 I   1       64.638   8.174  16.414  1.00 89.13 I
  15 ATOM   2387  O1  SO4 I   1       65.311   9.465  16.666  1.00 88.78 I
     ATOM   2388  O2  SO4 I   1       63.197   8.413  16.200  1.00 89.62 I
     ATOM   2389  O3  SO4 I   1       64.827   7.262  17.566  1.00 88.49 I
     ATOM   2390  O4  SO4 I   1       65.197   7.555  15.196  1.00 89.77 I
     ATOM   2391  S   SO4 I   3       84.884  -1.751  12.531  1.00 81.17 I
  20 ATOM   2392  O1  SO4 I   3       84.762  -0.302  12.775  1.00 81.32 I
     ATOM   2393  O2  SO4 I   3       84.538  -2.490  13.758  1.00 81.49 I
     ATOM   2394  O3  SO4 I   3       86.280  -2.053  12.162  1.00 81.73 I
     ATOM   2395  O4  SO4 I   3       83.976  -2.163  11.440  1.00 81.19 I
     ATOM   2396  S   SO4 I   5       74.420  22.898  12.677  1.00 85.50 I
  25 ATOM   2397  O1  SO4 I   5       73.256  22.153  12.161  1.00 85.36 I
     ATOM   2398  O2  SO4 I   5       75.637  22.104  12.412  1.00 84.51 I
     ATOM   2399  O3  SO4 I   5       74.250  23.138  14.126  1.00 84.13 I
     ATOM   2400  O4  SO4 I   5       74.527  24.202  11.997  1.00 85.44 I
     ATOM   2401  S   SO4 I   6       68.798   6.993  -3.457  1.00 73.84 I
  30 ATOM   2402  O1  SO4 I   6       68.338   7.338  -4.823  1.00 72.86 I
     ATOM   2403  O2  SO4 I   6       69.298   8.206  -2.791  1.00 73.61 I
     ATOM   2404  O3  SO4 I   6       69.888   6.003  -3.540  1.00 73.52 I
     ATOM   2405  O4  SO4 I   6       67.690   6.426  -2.658  1.00 73.19 I
     ATOM   2406  O2  PO4 P 100       66.501  25.721   2.616  1.00 85.98 P
  35 ATOM   2407  O3  PO4 P 100       64.376  25.028   1.654  1.00 86.96 P
     ATOM   2408  O4  PO4 P 100       65.755  26.653   0.496  1.00 86.51 P
     ATOM   2409  O1  PO4 P 100       64.621  27.279   2.570  1.00 86.98 P
     ATOM   2410  P   PO4 P 100       65.315  26.170   1.832  1.00 87.36 P
     ATOM   2411  S   SO4 X   3       80.775  -0.045   7.874  0.50 22.29 X
  40 ATOM   2412  O1  SO4 X   3       81.160   0.521   9.176  0.50 22.30 X
     ATOM   2413  O2  SO4 X   3       81.320  -1.407   7.778  0.50 22.49 X
     ATOM   2414  O3  SO4 X   3       81.309   0.781   6.777  0.50 23.26 X
     ATOM   2415  O4  SO4 X   3       79.305  -0.088   7.772  0.50 24.36 X
     END
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